

Disaster Education



Building Research Institute (BRI)

National Graduate Institute for Policy Studies (GRIPS)

2007

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Foreword

Education and public awareness are the cornerstone of approaches aimed at reducing vulnerabilities to natural hazards. The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters, adopted at the World Conference on Disaster Reduction, highlights knowledge and education as one of the five main priorities of action. Attention should be accorded, and support given to efforts targeting schoolchildren and youth with the aim of making people more aware of the threat of hazards and of the need and possibility to become better prepared before disasters strike. As we progress into the implementation of both the Hyogo Framework and the United Nations Decade of Education for Sustainable Development (DESD, 2005-2014), the pride of place that the international community, national academic institutions and educational establishments concerned with disaster risk reduction are giving to education is based on evidence that education contributes towards the knowledge and skills essential for disaster preparedness.

The project which was carried out on Disaster Education by the Building Research Institute (BRI) and the National Graduate Institute for Policy Studies (GRIPS) in Japan is a timely and pioneering initiative. It proved to be a valuable effort to take stock of the status of education and disaster risk reduction worldwide and to review information collected, thus laying the foundations for refining future orientations in the integration of disaster preparedness into educational programmes. As the lead agency for the DESD and a primary partner of the United Nations Secretariat of the International Strategy for Disaster Reduction in the 2006-2007 World Campaign "Disaster risk reduction begins at school", UNESCO welcomes the initiative of BRI and GRIPS. The Organization, which has accompanied this exciting research project, sees in it a flagship activity of the above-mentioned Campaign. At the dawn of what promises to be a new phase of emphasis on education and knowledge for disaster risk reduction, this publication you are about to read provides a significant resource which will guide stakeholders interested in education and disaster risk reduction.



Badaoui Rouhban
Chief
Section for Disaster Reduction
UNESCO, Paris

Preface

“We must, above all, shift from a culture of reaction to a culture of prevention. Prevention is not only more humane than cure; it is also much cheaper.... Above all, let us not forget that disaster prevention is a moral imperative, no less than reducing the risks of war.”

-Kofi Annan, Former Secretary General of the United Nations (Strategy for a Safer World in the 21st Century: Disaster and Risk Reduction, Geneva, July 9, 1999)

It is increasingly acknowledged that disasters are the result of natural and social processes. Unlike the natural conditions that have potential of hazards, social dimension of the disaster risk is much to do with what human being interacts with natures. Hence, human behavior is the crucial factor in the degree of vulnerability and the likelihood of disasters taking place. Here, education (knowledge) plays a significant role in society. Since disasters are infrequent in nature and memories are short in terms of passing knowledge from one generation to another, there is a need to promote culture of prevention. The misconception about disasters as nature's curse or divine's force till recent time is also a barrier in changing mindset of people towards safety culture. Here, only the educational reform can change this status quo and promote the disaster prevention practice.

The necessity of integration of the disaster safety concept in all forms of daily life is an obvious condition to achieve the goal of disaster reduction. It requires that the disaster risk reduction knowledge should be as a built-in component of knowledge block. Disaster awareness needs to be part of every individual's cultural heritage and the development of such attitudes should be encouraged in early childhood. Only schools give this opportunity to implant that culture to entire future citizens. As disaster risk management should be everybody's business, children of today must be appropriately educated and adequately trained to face the disaster risks that may be realized in the future in the wake of prevailing natural hazard potential. A new culture of disaster prevention will have to be created in the home, in school, in the workplace and in society in general.

The education to build up this new culture for disaster reduction must be permanent and integrative, and cut across all formal and informal educational efforts in close contact with reality. It is unfortunate, however, that the concept of Disaster Risk Reduction (DRR) education which is rather new, carried out with the notion of disaster professionals as “expert,” who presents the technical facts, figures, and analysis to the “ignorant” citizens. This has arisen out of a top-down approach to disaster awareness and education that gives DO's and Don't-DO's prescriptions for ordinary people. However, to be effective and integrating, it must go beyond the purely informative or instructive, and promote a new way of perceiving, feeling, thinking and behaving. It must open the way to a new lifestyle integrating the individual, the environment and society.

The goal of education efforts is to change people's behavior. Disaster education attempts to increase protective actions by people by presenting information about the hazard and the risk it poses. If planned effectively and well implemented, it will make, in long run, people habituate safety practice in all forms of their action. Similar to the common public health matters, citizen should be able to practice basic precautionary and remedy measures by themselves leaving only specific and more detail information to ask to experts and

professionals. However, the desired changes in behavior may take long time. Considering the education as an excellent opportunity for building awareness about disaster mitigation and for implementing a variety of activities that can minimize the negative impacts of disasters in all sectors, efforts are made to integrate DRR in education system in many countries recently.

Recognizing that disaster education can play a significant role to raise awareness among the people and to enhance capability of experts as well, National Graduate Institute for Policy Studies (GRIPS), Japan, has initiated in 2005 a master degree program on “Earthquake Disaster Mitigation,” jointly with Building Research Institute (BRI) and Japan International Cooperation Agency (JICA). Before 2005, BRI had been implementing a training course on seismology and earthquake engineering, which was upgraded to the master program. In line with their program, GRIPS and BRI conducted a research project in 2006, aiming to collect information about the disaster education over the world and analyze them, in order to understand the current situation of the disaster education and to explore its future directions.

Targeted disaster education in this research was (a) Education of children (primary and secondary), (b) College/university education, (c) Education of ordinary people at community level. The case studies on disaster education in Japan, Fiji, Indonesia, Uzbekistan, India, and Nepal were also conducted. This research was conducted in cooperation with other institutes/organizations as a joint research as follows.

- (1) School education in the world and a case study of India
Indian Institute of Technology Bombay (IITB), India
Prof. Ravi Sinha
- (2) Education for ordinary people and a case study of Nepal
NSET-Nepal, Nepal
Mr. Amod Dixit
- (3) Disaster education in Japan
Asia Disaster Reduction Center
Ms. Takako Chinoi
- (4) Disaster education in Indonesia, Fiji, and Uzbekistan
Mr. Bishnu Pandey (UNCRD)

This research was conducted in association with the Decade for Education and Sustainable Development designated by UNESCO and the 2006-2007 Campaign “Disaster risk reduction begins at school,” by the UN ISDR Secretariat. The whole research was directed and managed by Professor Kenji Okazaki, GRIPS, with assistance of Professor. Ikuo, Shimomura, GRIPS. Ms. Marla Petal, Director of Risk Red, kindly offered "Compendium of Who What Where Recent Efforts in School Safety and Disaster Risk Reduction Education 2005 - 2007" (Appendix 6), which was compiled by Risk RED, based on correspondence from contributors to the UNISDR Knowledge and Education Platform.

2007
Kenji Okazaki
Professor, GRIPS

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6. Compendium of Who What Where Recent Efforts in School Safety and Disaster
 Risk Reduction Education 2005-2007

(Appendix is included in the attached CD-ROM.)

1. School Education for Disaster Reduction

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1.1 School Curricula around the World

(1) Introduction

1) BACKGROUND

The number of disasters over the world is increasing year by year. These disasters include natural calamities as well as manmade conflicts like war, terrorist attack, chemical abuse etc. As per the Red Cross report over the last decade an average of 242 million people per year were killed and affected by disasters and conflicts. Natural catastrophes reportedly cost an estimated US\$ 78.7 billion per annum (2000 prices). The costs of disasters are also increasing year by year. Hence it has become essential that the disaster /risk management skills are imparted to public in general and to the younger generation all over the world.

There are many agencies that are taking initiatives to help local governments in implementing disaster management skills at early stages of childhood. In this report an effort is done to collect the information on disaster management education that is being taught formally and informally in different countries. The focus is on the extent of different types of disaster mitigation and survival techniques imparted to students of primary and higher primary schools. The World Wide Web is the main source of information compiled in this report. Several countries have implemented the disaster rescue and relief operation skills at school level, but the detailed information on curriculum is not available. In such cases an effort is done to collect the information through mails, phones and published reports.

The analysis of available information is carried out in a standard pre-decided format, so as to give a clear idea on the extent of disaster management education is taught in the school all over the world. One of the main points considered for analysis is whether the school curriculum includes basic information to students on Do's and Don'ts during the disasters such as earthquakes and flash floods. Many of the countries impart basic disaster management skills informally through posters, seminars and drills without including

in the formal curricula. The earthquake drills for primary students play an important role in communicating necessary measures the kids have to take during emergencies, which can save their lives and fatal injuries. This point is also considered in our analysis review. The report consists of a detailed curriculum for each country where information has been available. An analysis conducted on available information in terms of fact sheet at the end of the report.

2) LIST OF COUNTRIES WITH HAZARDS TEACHING PRIMARY OR SECONDARY SCHOOL CURRICULUM (EXCLUDING INDIA)

Algeria, Argentina, Australia, Bangladesh, Bolivia, Brazil, British virgin islands, Montserrat, Columbia, Costa Rica, Cuba, Czech Republic, El Salvador, France, Greece, Hungary, Iran, Japan, Kenya, Lithuania, Madagascar, Mauritius, Macedonia, Monaco, Mongolia, Nepal, New Zealand, The Philippines, Portugal, Romania, Russian Federation, Senegal, Sweden, Tonga, Turkey, Uganda, United States of America, Venezuela

3) MAJOR OBSERVATIONS

As per the collected information on school curriculum the disaster management is being taught as a formal education in very few countries. Also many of the countries have different school boards. Each board follows a different curricula and there is no compulsory requirement for these school boards to include disaster management in the school curricula (e.g. in Australia, Bangladesh, India, and United Kingdom).

Many of the school boards teach emergency drills informally by seminars and posters. The Do's and Don'ts during emergencies, e.g., during earthquake, are just given as informal information to students. Very few countries conduct earthquake drills as a national activity in schools. In many of the cases the disaster management subject is limited to earthquakes and floods only, the other types of disasters are not included at all.

From the analysis one can see that many countries have just started to implement disaster management sub-

jects in their school boards, this can be seen in detailed report. In many of the countries the implementation of disaster related subjects is mainly because of the initiatives by NGOs and international agencies such as UN/ISDR, ADRC, etc. It is also seen that there is a strong experience context in the implementation of disaster management curricula, and most countries that have implemented them had experienced a major disaster immediately preceding the introduction of these topics.

4) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF ALGERIA

During their six years of primary school, Algerian children are taught about natural disasters through stories at the rate of one lesson per year. During the 2005 school year, for example, Algeria's primary schools introduced stories about the 2003 Boumerdes Earthquake to second-year students. During the three-year period of the secondary school, young people are taught about other natural phenomena - mainly earthquakes, floods, and volcanoes, but again, only through one lesson per school year. In the pre-university years, youth are taught about geology, plate tectonics and, again, earthquakes. This teaching is more systematic.

5) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF ARGENTINA

Natural hazards are part of national curricula in Argentina. The schools seem to refer web pages for effective teaching of disaster managements. "ABC Desastres" a web based knowledge base is being hosted for kids. The information on detailed curriculum implemented is not available.

6) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF AUSTRALIA (QUEENSLAND)

The disaster management studies are very well implemented in some of the school boards of Australia. The Queensland school curriculum is depicting much of the major hazards that are taught at very primary levels. The detailed syllabus is mentioned below.

Bushfires

Information about fires with reference to Australia's worst fire related disasters given in Middle Primary (years 4-5) to Lower Secondary (years 8-9) levels. A book "Australia's worst disasters" by Barwick, John and Barck, Jennifer is referred as teaching. Conditions conducive to bushfire are explained in detail. Black Friday, Ash Wednesday and others are used to illustrate and reinforce discussions on causes. A Book "Bushfire" by Mc Clish, Bush is referred for further studies. The fire risk reduction, remediation strategies are taught in school at primary level.

Earthquakes and Tsunamis

Causes of earthquakes and photographic examples of some of the more severe ones are shown in curriculum of Middle Primary (years 4-5) to Lower Secondary (years 8-9) levels. Earthquake disasters of the last century are reviewed. Movements in the earth's crust such as folds and fault lines are detailed. Actions of tectonic plates along with places of greatest pressure are discussed. How earthquakes start; the function of shock waves and measuring earthquakes are all covered. Examples of earthquakes in California, India and Britain are detailed out. Where and how earthquakes begin, description of earth's tectonic plates, particularly the 'Ring of Fire' around the Pacific, three separate waves which inflict damage, and the tsunamis caused by under water quakes are also discussed. Methods of measuring, predicting and preparing for quakes, along with description of the worst historical disasters are given as text material for students.

Floods

Why floods happen, the damage they cause and what can be done to prevent floods in the future are described. Emphasis is given to floods as the most common natural disaster that affects people. Movement of water, what causes rivers to flood, what causes coastal floods, predicting floods, people living on flood plains, flood disasters, benefits of floods, and global warming are taught. A book "Floods" by Barber and Nicola is taken as reference. Causes of floods are described and potential benefits, flood prevention and methods of control are discussed in Middle Primary and Upper Primary classes. The book by Bullen and Susan, "Flood damage" is used for reference.

Tornadoes

Storms, tornadoes, severe water and dust storms, hurricanes, weather and dramatic weather systems are taught at Upper Primary and Lower Secondary levels. Different forms of windstorms that affect Australia being described in detail. These include Cyclone Tracy, two earlier severe cyclones at Bathurst Bay and Broome, and the hailstorms which swept Sydney in early 90s, all of which caused loss of life and extensive damage are covered in Middle Primary and Lower Secondary Classes A book called "Cyclones and Storms" by Barwick, John, Barwick and Jennifer is used as text. Why storms happen, and what scientists can do to try to predict them. What causes storms, types of storms, and the El-Nino effect, storm hazards, predicting storms, famous storms, rescue and prevention, and satellite pictures are presented at Middle Primary and Upper Primary level classes.

7) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF BANGLADESH

The disaster management chapters are included in the school curriculum of classes 5th to 12th standard. The Disaster Management Bureau (DMB) has been able to introduce disaster management messages and awareness programs into primary and secondary school curricula up to grade 12. In 1997, the DMB was successful in mandating that all children from grades 6 to 8 be required to read a chapter on disaster management as part of the school curriculum.

School programmes of disaster preparedness and disaster-specific curriculum for the children in cyclone prone areas have been implemented. Intensive Community Disaster Preparedness Programme (ICDPP) is a risk reduction programme implemented in the cyclone prone coastal belt of Patuakhali and Bhola of Bangladesh. In Patuakhali, SAP-Bangladesh, a national NGO through its Disaster Preparedness and Management Unit under ICDPP facilitating children's involvement in disaster management, their acquaintance with cyclone, its probable impact and measures to be taken for minimize damage and loss minimization.

In all the 8 (eight) Primary Schools established by SAP-BD at various chars in Char Rangabali and Char Montaz, by rotation, dialogue has been held with the primary and secondary students on (i) cyclone and other hazards in the area, (ii) damage and loss caused by the disaster, (iii) preventive, preparatory and mitigation measures, (iv) coping strategy in the locality, (v) better ways of disaster response, etc. Such discussion has offered disaster-specific learning to the students along with stereotype syllabus. The prime objectives here have been

1. Enhancement of children's idea on disaster preparedness and response
2. Sharing the disaster tips with family members and the friends around
3. Disaster message dissemination amongst the family, and
4. Disaster reduction through applying up-graded skill and knowledge.

In addition, SAP-BD Disaster Preparedness and Management [DPM] Unit has prepared a curriculum entitled Durjyog Shochetonotay Shishura (Disaster and the Children: Moduled Lesson-guide to raise Children's Understanding of Cyclone Disaster) to enable the kids to come across various valuable tips of cyclone disaster. The curriculum book touches disaster topics such as:

1. Disaster concept and its types
2. Identification and profile of vulnerable spots in the locality

3. Necessary life-saving materials and their proper preservation
4. Exposure to floating items
5. Cyclone warning and its dissemination through signal flag
6. Awareness on health, nutrition and sanitation
7. First aid and its application
8. Diarrhea, ORS preparation and WPT use
9. Preservation of food and water for use in disaster after-math
10. Children's role and responsibility amidst disaster

8) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF BOLIVIA

Natural hazards are part of national curricula in Bolivia. Curriculum development is decentralized and integrated into environmental studies in Bolivia. The detailed Information on curriculum is not available on World Wide Web.

9) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF BRAZIL

No information about disaster management curriculum in school available. However as per the UNDP report there exists a curriculum at primary school level. Brazil has produced a national report to the World Conference on Disaster Reduction 2005, with some information of curriculum on disaster management at school level. The report could not be referred as it is not provided in English.

10) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF BRITISH VIRGIN ISLANDS

Currently disaster related components included in courses such as Social Studies at the Primary level. The disaster risk reduction in public school system is also highlighted in school curriculum. Discussions have taken place with personnel from the BVI Department of Disaster Management and the BVI Ministry of Education on the formal institutionalization of disaster management into the school curriculum. Work on this is currently ongoing. In addition, a children's handbook entitled "What Every Primary School Child in the BVI should know about Disasters" was developed by the Department of Disaster Management and distributed to the various primary schools throughout the BVI. The handbook focuses on hazards such as hurricanes, earthquakes, fires, lightning, drought, volcanoes, landslides, oil spills, hazardous materials, and floods.

The detailed information on curriculum is not available though the mails and letters were sent to some of the schools to collect information.

11) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF COLUMBIA

No information about disaster management curriculum in school available. However as per the UNDP report there exist curriculums at primary school level. The country has produced a national report to the World Conference on Disaster Reduction 2005, with some information of curriculum on disaster management at school level. The report could not be referred as it is not provided in English.

12) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF COSTA RICA

The concepts were included in Costa Rica's National Education Plan for Risk and Disaster Reduction, designed with the participation of several institutions and international agencies involved in disaster reduction. The goal was to provide inputs to teachers and students that explain scientifically and objectively the origin and consequences of various natural and man-made phenomena. The Plan, which replaces the Emergency Education Programme established by the Ministry of Education in 1987, is a multi-disciplinary and inter-institutional effort to promote risk management, and is based on the Hemispheric Plan of Action for Disaster Reduction in the Education Sector and the Institutional Strategic Annex on Risk and Disaster Education and Vulnerability Reduction, which the deputy ministers of Education of Central America signed in Guatemala City in 1996. Educational authorities renewed their commitment to the plan in San José, Costa Rica, in November 1997.

The curriculum contains a clear picture of reality as something that can be transformed in order to reduce risk and natural disasters. Conceptual and scientific components integrated with research by students and teachers and involvement at the family and community levels, so that civil society can play a role in the process.

Since 2003 Costa Rica has developed extensive hazards and safety teaching under the heading, "Environmental culture for sustainable development." The Ministry of Education's Office of Environmental Education has trained 120 cadres in the teaching about disasters in all the country's administrative areas. They have, in turn, trained 6,000 teachers. Teachers are encouraged to develop lessons based on the hazards and patterns of vulnerability in the specific locality, and students enjoy active, participatory learning through hazard-mapping and collection of information from the community. They also narrate experience, discuss moral dilemmas, and conduct debates and brainstorm. Younger students have games, songs and audiovisual presentations. Much published material supports these teachers.

13) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF CUBA

Disaster preparedness, prevention and response are woven into the Cuban school curriculum from primary school to the university level. Routine trainings on risk reduction are also conducted in institutions and workplaces to target Cuba's adult population. A yearly two-day training exercise is also organized in order to remind inhabitants of their critical role in disaster risk reduction for hurricanes and to apply any lessons learned from previous years.

However, there is no detail information of school curriculum implemented. The Cuban Government has empowered a number of national institutions and mechanisms for disaster risk reduction. The country's disaster mitigation, preparedness, response, and recovery measures and structures are enshrined in law, and those laws are enforced. Moreover, the High Command of the Cuban National Civil has been charged with taking decisions in implementing all risk reduction measures and procedures in case of natural hazards.

14) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF CZECH REPUBLIC

Some of the problems of disaster reduction are treated within physics, chemistry subjects of primary to secondary school levels for the age range 10-15 years. Schools (secondary) include some aspects of disaster prevention into their programs. It is more difficult to educate adults. Mass media are involved but not in a systematic way. Their interest about disaster risk reduction increases during disasters.

15) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF EL SALVADOR

Natural hazards are part of national curricula in El Salvador. El Salvador uses diverse active methods such as child-to-child teaching, work camps, simulations, risk mapping and the recruitment of youth into "Solidarity Brigades" that are, in effect, auxiliaries of the civil defence structure.

The detailed information on curriculum is not available though the mails and letters were dispatched to school authorities in El Salvador for getting detailed information.

16) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF FRANCE

The seven-hour programme has been designed for students in secondary, primary and pre-primary education. In secondary education, each school is assigned a "correspondent" for the programme, who may be a teacher or parent; and four students from each class are

trained as "prevention assistants", who are responsible to the "referee teacher". The assistants' role is to assist the teacher in case of a problem and increase awareness of the principles of the Prevention - First Gestures programme among fellow students. Assistants must also organise an exhibition on local risks. In primary schools, the referee teacher trains students on how to respond and behave in an emergency. In pre-primary schools, the correspondent instructs students to watch adults and practice the "first gestures". Between 1996 and December 2002, more than 6,200 people in the Grasse area have participated in the Prevention - First Gestures programme. Since 1999, over 3,300 students have been involved in the programme, including 663 prevention assistants, 153 referee teachers and 166 school classes. More than 5,000 students and 300 adults have participated in training programmes about school buses.

17) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF GRECE

No information about disaster management curriculum in school available. However as per the UNDP report there exist curriculums at primary school level. The country has produced a national report to the World Conference on Disaster Reduction 2005, with some information of curriculum on disaster management at school level. The report could not be referred as it is not provided in English.

18) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF HUNGARY

No information about disaster management curriculum in school available. However as per the UNDP report there exist curriculums at primary school level. The country has produced a national report to the World Conference on Disaster Reduction 2005, with some information of curriculum on disaster management at school level. The report could not be referred as it is not provided in English.

19) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF IRAN

Iran has nationwide earthquake safety education in its schools, supported by a wide range of text-books, and reinforced by posters and public awareness campaigns for families and the general public. Between 1996 and 2003, the country developed a national system of annual school earthquake drills in stages, beginning with trials in Tehran and eventually reaching all 16 million primary and secondary students by 2003 (Ghafory-Ashtiany and Parsizadeh 2005). Educational efforts have increased since the Bam Earthquake in

2003. Evidence suggests, however, that what children learned in school even before that tragedy helped save lives.

In the elementary level (3rd grade) introduction is given on type of disasters. A poster on what to do during earthquakes is given in social studies subject. What to do when an earthquake comes is taught in 4th grade science subject.

20) DISASTER MANAGEMENT CURRICULUM IN HIGHER PRIMARY SCHOOLS OF JAPAN

Practical experience is the key word of the environment and disaster mitigation courses taught at Maiko High School in Kobe City. The followings are the characteristic activities of the course implemented there.

Lessons by the Guest Teachers

Many teachers are invited to school to talk about their experiences during and after the disaster. Teachers are from universities, police stations, fire stations, life-line related companies, the city government, the prefecture government, the volunteer organizations and so on. Through this activity they hear the stories of the disaster, preserve them, and put them on the Home Page. Their precious stories make the students realize the importance of human lives and help to each other, which is the energy to facilitate the citizen-centred disaster mitigation.

Studies Outside of the School

The students visit the Disaster Reduction and Human Renovation Institute (Museum of Great Hanshin-Awaji Earthquake 1995) and Earthquake Memorial Park in Hokudan Cho. They walk around the disaster area to interview the citizens. They stay one night two days at Kobe Fire Academy to learn the fundamental skills of extinguishing fires, rescuing people, and collecting information. They take part in the disaster mitigation training held by the prefecture, the city and the regional ward. They go to the Rokko Mountains to investigate the faults, the dangerous streams of debris flow, and the raised bed rivers, which were the causes of the floods in Kobe.

Problem Solving Study

While studying the disaster mitigation, the students are not only given lectures to get the knowledge but also given the problems, or they set the tasks by themselves and they solve them by the students themselves or by the cooperation with the other students. For example, in the study of "the disaster management of a virtual community", the students set the population, the industry and the geographic characters of the community, and made a "Disaster Management Manual". In another activity, the students study the relationship between some typical disasters which took place in

Japan and the laws which were adopted after the disasters. They made a newspaper of the heavy floods in Kobe area and used this newspaper to teach the pupils in an elementary school. The aim of these activities is to have the students master the attitude and the technique of life-long education. Once the students master the cycle of the life-long education, they can continue learning in their long life.

Computer Study

The students use the computers to make a report, to give a presentation, and to get information by internet. Through this activity the students master the fundamental skills of computers and gain necessary knowledge of the information society. Maiko High School is in corporation with an elementary school to do the disaster mitigation education. The students make a regional map with the 3rd year pupils. They don't call this map "Hazard Map" but call it "Safety Map" because they believe that people don't feel like living in the town full of dangerous information. On the other hand, they become serious to the disaster mitigation of the community if the map is full of the places they like and are proud of.

The students talk about their experiences of the Great Hanshin-Awaji Earthquake Disaster to the 4th and 6th year pupils. Maiko High School students were 1st or 2nd year pupils in 1995. Their experiences were hard and tough and serious but they didn't have good vocabulary to express their experiences. Now they use the high school students' language to tell the experiences of the small children. To teach the mechanism of the earthquake and the importance of preparedness they use the "Wall Newspaper". To the 5th year pupils the high school students show the experiment of the flood and teach the history of the heavy flood in Kobe by the newspaper they made. The pupils learn something about the disaster mitigation and they are sure to talk about what they learned at school to their family members at home. While listening to the children's story, the parents may be interested in the disaster mitigation and then, the regional disaster mitigation may start.

Events of Disaster Mitigation

Every January 17th a memorial event for the victims of the Great Hanshin-Awaji Earthquake Disaster is held at Maiko High School. The purposes of the event are the collection, the arrangement and the transmission of the experiences of the Great Hanshin-Awaji Disaster and the construction of the base centre of the disaster mitigation education. "The record collection" is published. It will be used as the teaching materials of both Maiko High School and other schools. In addition, it could be transmitted to the world. The students are engaged in planning and coordinating workshops, requesting lecturers, publishing record collections, and so on.

Schools must do the training of evacuation twice a year. The ordinary training is that after the fire alarm rings, the students evacuate to the school ground. The students seem less motivated and so they are not so serious in this training. At Maiko High School the conventional training of evacuation is changed into the new training with the disaster mitigation study at classroom or the lectures of disaster mitigation at school gym.

Presentation outside of the School

The teachers and the students are often invited to the seminars or the workshops outside of the school. They utilize these opportunity for both the advertisement of the course and the spread of the disaster mitigation education.

International Exchange with Nepal

NSET-Nepal helped them send some students of Maiko High School to let them have the international exchange with the students in Nepal. They learn a lot from the experiences staying in the rural part of Nepal, talking with the children, teachers and villagers.

21) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF KENYA

Attempts have been made to incorporate elements on disaster, at the lower level primary school children are inculcated with a sense of preserving the environment, they are taught about the risks of environmental degradation and importance of planting trees and grass to avoid soil erosion.

At secondary school level the environmental education components are integrated in to syllabus and covered in a variety of subjects. At tertiary and university level the students take on the subjects of their interest and those who end up in subjects covering risk reduction may end up as professionals in that field. Detailed information on curriculum is not available.

22) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF LITHUANIA

Educational programmes related to disaster risk reduction are in public school system for 11-18 year children, in vocational schools and colleges. Civil protection teachers attend trainings and seminars on civil protection. Detailed information on curriculum is not available.

23) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF MADAGASCAR

No information about disaster management curriculum in school available. However as per the UNDP report there exist curriculums at primary school level. The country has produced a national report to the World Conference on Disaster Reduction 2005, with

some information of curriculum on disaster management at school level. The report could not be referred as it is not provided in English.

24) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF MAURITIUS

In primary school level (age 5-11 years), disaster risk reduction issues such as precautionary actions for cyclones; floods, etc. are included in subject Environmental Science. No much information is available on detail curriculum implemented.

25) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF MACEDONIA

In the elementary school education, some contents and activities in the domain of risk prevention and protection (risk prevention culture) has been designed and incorporated in the new curricula for the fifth to the eighth grade (age 10 - 14). The curriculum is mastered through the regular teaching process within a number of teaching subjects as follows.

Technical education:

Gas as source of energy, handling gas apparatuses and protection in case of a disaster; traffic accidents and protection in traffic; fire and protection against fire; apparatuses and other devices used in households and school; personal protection during work; technological disasters; simulation of danger signs and procedures in case of their emission; electric shock - dangers and protection;

Geography, earthquakes, floods, lightning, storms, draughts, eruption

Procedures for protection against such catastrophes and storms are taught.

Physics, Chemistry, Biology

Radioactive elements, procedures for protection radio active emission; Procedures for protection against poisonous chemicals and other types of poisoning; Protection of living environment, first aid, disruption of the healthy food chain, biological weapons, epidemics and other contagious diseases, procedures for prevention and protection are included. Physical and health care education, evacuation drills, use of shelters and natural places for protection, immobilization, saving and transportation of injured are also taught.

In the high school education in Republic of Macedonia (age 14-18), there is the subject of Peace, Defence and Protection (in the reformed high school education) with 36 lecture hours. It is an optional obligatory activity through which the students acquire knowledge, skills and capability of self and collective protection and safety.

In the second grade vocational school, there is an obligatory subject entitled "Defence and Protection". It is covered by two lecture hours per week and enables

the students acquire the necessary knowledge in safety and protection.

26) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF MONACO

No information about disaster management curriculum in school available. However as per the UNDP report there exist curriculums at primary school level. The country has produced a national report to the World Conference on Disaster Reduction 2005, with some information of curriculum on disaster management at school level. The report could not be referred as it is not provided in English.

27) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF MONGOLIA

The disaster preventing is now reflected in the curriculum of the general educational schools. Teaching materials on this subject to be used by teachers are now available. The training of students and pupils is organized by the State Administrative Central Agency in charge of education based on the lesson plans of the corresponding school.

28) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF NEPAL

In Nepal educational programs relating to disaster risk reduction is in public school system for the students of 10-14 years of age group. To support the teachers in this area, textbooks, posters, placards, banners and necessary educational materials are prepared.

Disaster related topics are taught in science, Environment and social studies subjects for grade 8 to grade 10 students. Flood, Landslide, soil erosion, pollution, and epidemic are focused more than other disaster. Above disasters are deeply link with environment. Earthquake and windstorm are not focused.

Some disasters covered by textbooks are high percentage. Flood, landslide, and environment related topics are high percentage. More science teachers teach flood, landslide, and earthquake than other subject teachers. In each subject, causes and nature of disasters, effects of disasters, lessons from past disasters, disaster risk reduction/mitigation, preparedness, response-rescue and relief, reconstruction and rehabilitation, and role of community/institution are taught. Main activities are discussion with students and discussion among students. There is not large difference among three subjects. In H.P.E., audio visual is used more often than other subjects.

29) DISASTER MANAGEMENT CURRICULUM IN SECONDARY SCHOOLS OF NEWZEALAND

The Ministry of Education provides curricula

material for students and guidelines for school management as to how to plan and manage emergencies. Schools are required to provide for this in their strategic plans under their purchase agreement deliverables.

New Zealand also has a CDEM Public Education Strategy and a multi-agency Committee which overviews the development of initiatives in this arena. Local civil defence personnel are responsible, along with all emergency services, for the running of community safety programmes in schools. Community safety programmes with respect to a variety of personal risks are well integrated into public school system, particularly for the primary school age group, that is 5 years to 13 years. Well-designed packages are available.

"What's the Plan Stan" is an initiative by the government of New Zealand which aims to support teachers to develop their students' knowledge, skills and attitudes to respond to and prepare for an emergency.

① Curriculum resources for Years 1-3

The students are taught about disaster in Health and Physical Education subject. The learning intentions are that the students will be able to explain that disasters are natural and non-natural, and demonstrate simple practices to keep themselves safe at school and home. The students are taught about disaster in Social Studies. The learning intentions are that the students will be able to identify different groups who will respond to a disaster, explain their roles, and explain how disasters affect people and communities now and in the past.

② Curriculum resources for years 4-6

The students are taught about disaster in Health and Physical Education subject. The learning intentions are that the students will be able to identify and prepare for a range of disasters in the classroom, home and community, review the school's emergency response procedures and take action to enhance the effectiveness.

The students are taught about disaster in Social Studies. The learning intentions are that the students will be able to describe a range of groups, describe the functions of those groups. Also able to explain the way in which people respond to a disaster and learn from past experiences. In English subject they are advised to read and gather information on disasters from a range of texts.

③ Curriculum resources for years 7-8

The students are taught about disaster in Health and Physical Education subject. The learning intentions are that the students will be able to identify and prepare for a range of disasters in the classroom, home and community, describe their local community's needs in the event of a disaster and take action for the care and safety of the people in their family and community, review the school's emergency response procedure and

take action to enhance their effectiveness. The students are taught about disaster in Social Studies. The learning intentions are that the students will be able to explain the ways in which people have responded to disasters and explore the consequences of decisions made, identify groups trained to help in different type of disasters.

In English subject they are advised to read and gather information on disasters from a range of texts. Other than the curriculum resources, following resources are also devised for use in primary and secondary schools (1) Simulation and Practice Activities, (2) Disaster Activities and Fact Sheets (3) List of References and Templates to be used by the teacher.

30) DISASTER MANAGEMENT CURRICULUM IN HIGHER PRIMARY SCHOOLS OF THE PHILIPPINES

Disaster awareness is part of the learning core competencies under Science in public elementary and high schools. The curricula and textbooks, "Science and health 6" and "Science and Technology- I" were developed in collaboration with the disaster management agencies such as the PHIVOLCS and PAGASA. Both Agencies also train the public school teacher on natural hazards, preparedness, and other disaster concepts.

For general public, hazard awareness and preparedness are communicated through various print materials, comic books, brochures, and posters. In 2002, a movie/TV plug about proper earthquake precautionary measures was shown in theatres and government TV station nationwide. In 2004, a movie/TV plug about precautionary measures during tropical cyclones was telecasted.

Innovative teaching materials have also been developed. In 1990, PHIVOLCS came out with a video titled "The Killer Quakes" which highlighted the impacts of the 1990 earthquake. Another video package titled "The Earth Trembled.....then Killer Waves Came!" featured the impacts of 1994 Mindoro earthquake. In 2001, to let people experience an earthquake, the earthquake simulator was fabricated. The simulator is a small booth complete with a table and stools. A machine simulates earthquakes at different intensities.

31) DISASTER MANAGEMENT CURRICULUM IN HIGHER PRIMARY SCHOOLS OF PORTUGAL

Issues connected with risk reduction are being more focused on schools, mainly in age group from 7 to 14. At the moment educational material to support teachers are being developed. There are also leaflets for children with advices in case of disasters.

No much information on curriculum being implemented at school level.

32) DISASTER MANAGEMENT CURRICULUM IN HIGHER PRIMARY SCHOOLS OF ROMANIA

No specific data on curriculum in school level is available. But the disaster management is indirectly being taught to school children by different initiatives of the Government of Romania. The disaster prevention and protection is presently recognized as a component of the government general policy to preserve the life safety and quality. Training the population on prevention and mitigation of disasters aftermaths is one of the most important tasks of the Civil Protection Command. According to the Prime Minister Decision no. 139/1999, training the population, decision makers and members of professional and voluntary civil protection formations are done through various and complex training forms (drills, exercises, meetings, briefings, symposiums, papers, sessions, seminars, workshops, training).

At the local level, the County Inspectorate for Civil Protection and the Fire Fighters, County Group train the population according with the external emergency plans to familiarize with the possible actions undertaken in case of accident. The access of the media and public are made at request, and is free for the industrial sites, which are considered nonstrategic. There have been elaborated and implemented programs of anti-earthquake education or in case of radiological or nuclear emergencies, in case of floods, chemical accidents, epidemics, animal epidemics. For this purpose there were disseminated general info materials (books, posters, articles, etc), but also detailed documentation (guiding manuals, specialized courses, measures and regulations, documentary motion pictures, etc.).The television, radio and press contributed substantially to the public information activity.

The "Civil Protection" magazine and other publications edited by the public authorities, and also the NGOs contributed to the appropriate and correct information of the population. The educative attributions of the Civil Protection Command and Civil Protection Inspectorates materialized in field disaster response exercises, involving a large number of people, in order to make aware the population about the existent risks and the appropriate preparedness measures. In medical field there are programmes of academic education for medicine students as well as post academic training programme for competency in "medical management of disasters" as in medical emergency training.

Regarding the counter seismic training of population, the Ministry of Transportation, Constructions and Tourism organizes periodically meetings with media, representatives of local public administration, specialists and population for presenting measures of yearly pro-

grammes for retrofitting of multilevel buildings and their state, protection and intervention measures. In case of an earthquake (by presenting and spreading of "Practical Guide on prevention and mitigation of seismic effects"(see it on site www.mt.ro prevention and mitigation of quakes effects") measures on fast inspection of earthquake damaged buildings.

33) DISASTER MANAGEMENT CURRICULUM IN HIGHER PRIMARY SCHOOLS OF RUSSIAN FEDERATION

At pre-school educational establishment there are organized studies with children on the program "Foundations of life safety for pre-school children". This program is targeted to teach children the rules of behaviour in dangerous situations in a street, public transport, when they come in contact with unknown people, dangerous articles, animals and poisonous plants. This course is designed to give children the basic knowledge on environmental culture, healthy and safe way of life.

Education of students of general educational establishments and establishment of primary, secondary and higher professional education is organized during a study time by educational programs on protection from emergency situations. These educational programs are approved by the Ministry of Education (ME) of Russia.

Millions of Russian pupils and students studying at general educational schools, gymnasiums, lyceums and colleges, vocational-technical colleges, higher educational institutions and non-school educational establishments make the basic human capacity for the future of the country. As a result most close attention is drawn to their education about protection from emergency situations.

The initial military training course that existed till 1991 did not contain the required scope of knowledge on behaviour of young students and pupils in emergency situations, thus, by Resolution of the RSFSR Council of Ministers of May 14, 1991, No. 253, a new course "Foundations of life protection science" (LPS) is introduced in state general educational establishments from the 1st to the 11th forms. The course of LPS is designed for 400 study hours that are distributed such as Theory and practice of man protection from harmful and hazardous factors in emergency situations (270 hours), Basics of medical knowledge and protection of children's health (53 hours), Basics of military training (77 hours). Beginning from 1994 the LPS course was also introduced in curricular of non-state general educational establishments. The pupils of primary and secondary vocational educational establishments study the LPS course for 140 and 90 study hours, respectively.

The main goal of this course is to teach students and

pupils the knowledge and skills how to protect the life and health of people in emergency situations, to render help to himself and others, to participate in liquidation of these situations. Study of this course serves shaping of a considerate and responsible attitude to the problems of personal safety and safety of those people around you, identification and proper assessment of harmful and hazardous factors of the natural environment, finding methods to hedge them. In most subjects of the Russian Federation this course is already included into regional basic study plans.

34) DISASTER MANAGEMENT CURRICULUM IN HIGHER PRIMARY SCHOOLS OF SENEGAL

No information about disaster management curriculum in school available. However as per the UNDP report there exist curriculums at primary school level. The country has produced a national report to the World Conference on Disaster Reduction 2005, with some information of curriculum on disaster management at school level. The report could not be referred as it is not provided in English.

35) DISASTER MANAGEMENT CURRICULUM IN HIGHER PRIMARY SCHOOLS OF SWEDEN

Educational programmes in Sweden focus on the common risks in the country such as fires in homes and other buildings. Sweden, with its glacial sculptured landscape, has an abundance of lakes which explains the efforts made for water safety and safety on ice. All elementary school children receive several years of swimming lessons as part of the curriculum. General information about water safety for boating and life saving techniques are also provided in the schools.

Because of the relatively small probability of natural disasters in Sweden, no established programmes for natural disaster reduction currently exist in the schools lower than the university level.

36) DISASTER MANAGEMENT CURRICULUM IN HIGHER PRIMARY SCHOOLS OF TONGA

Secondary school students (form 4-5) always have projects on natural disaster, but they are not familiar with the subject or training materials used at school. They do not have the technical experts to teach the students on the nature of natural disaster.

37) DISASTER MANAGEMENT CURRICULUM IN HIGHER PRIMARY SCHOOLS OF TURKEY

Curriculum materials to support a nation-wide school-based basic-disaster preparedness education program for children and adults completed recently. A 32-page Basic Disaster Awareness Handbook, covering all

hazards was developed for middle school children and adults. The booklet covers: Disaster Awareness, Disaster Hazards and Risks, Before a Disaster, During and After a Disaster, All Hazards, and Next Steps.

25,000 Handbooks were printed by the Ministry of Education and distributed to school-based basic disaster awareness instructors. Materials were selected, translated, newly developed and designed for BDA Children's Workbooks for ages 7-1 and ages 12-15. Activities for students were designed for each age group to be done without adult support.

Materials were also selected, translated, newly developed, and designed for classroom activities designed to integrate BDA curriculum with national school curriculum lessons for primary (Grades 1-5) and middle school (Grades 6-8) by an "Educational Materials Development Workgroup" consisting of members of the Istanbul Provincial Directorate of the Ministry of Education, Earthquake Training Committee, and BU Education Faculty members, experts from BU KOERI, and Project Staff. Twenty developed for each age group (see Appendix: BDA Classroom Activities List) Revisions were made based on feedback covering: duration, effectiveness, efficiency, steps, appropriate grade level, appeal, and potential for integration into national curriculum.

A Basic Disaster Awareness Instructor's CD-Rom was developed including 3 versions of the BDA slide presentation including video clips and instructor notes, pre- and post-test materials, 14 classroom activities, the BDA Handbook, and ancillary instructor support materials. 25,000 Instructor CDs were reproduced by the Ministry of Education and distributed to basic disaster awareness instructors throughout Turkey.

Curriculum materials to support a nation-wide school-based education program in structural awareness and non-structural mitigation for trade and apprentice high-school students were completed. Structural awareness for seismic safety, and non-structural mitigation educational materials were re-designed for new target population of trade and apprentice high school students and their instructors. Structural Awareness for Seismic Safety and Non-Structural Mitigation Curricula have been distributed on CD-ROM to teachers in the pilot program (including slide presentations, pre- and post-test materials, handbooks, and ancillary instructor support materials). Handbooks and posters will be made available on www.ahep.org and www.meb.gov.t. The curricula are both being utilized for integration into the national curricula currently being revised for trade and apprentice high schools.

38) DISASTER MANAGEMENT CURRICULUM IN HIGHER PRIMARY SCHOOLS OF UGANDA

The educational programmes in place cover hazard studies such as climate change, environment degradation, and drought and flood patterns. These programmes have not been re-oriented to address disaster risk reduction related to the hazards.

Procedures of Establishment of the Civil Defence Branch in school are published in the bulletin review of Ministry of Education. There is a unit relating the civil defence and disasters in the National Security Lesson in the first class of high school. First aid and disaster subjects are given in the biology and health lessons.

39) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF UNITED KINGDOM

① The Curriculum

In secondary schools in England natural disasters are almost exclusively taught within the Geography syllabus. 'Disasters', as such, are not National Curriculum required elements in any other subject areas and, although there are opportunities to include this topic in subjects such as Science and Design & Technology, teachers are understandably not willing to take on more than they have to.

In the proposals for Citizenship Education pupils, at Key Stage 3, would be required to develop knowledge and understanding about the work of voluntary bodies, whether community based, national or international and to understand the world as a global community and the political, economic and social disparities that exist. These offer an opportunity to bring wider dimensions to teaching about disasters but teachers would need access to resources to help them do this, particularly if this area were taught by non-specialists.

② Geography

Perhaps the most significant aspect of teaching about disasters in Geography lessons is that they form part of themes in the National Curriculum on tectonic processes, geomorphologic processes and weather and climate. All these are essentially physical Geography themes. This means that disasters tend to be taught about as one-off occurrences. The typical approach to, for example, teaching about earthquakes and volcanoes, is to study the reasons why they occur, where they occur, how they change the landscape and case studies of recent events. The social dimension is often provided by looking at newspaper cuttings and interviews which focus on the experience and after effects of an earthquake or a volcano. So the physical factors leading up to the disaster are covered well but the way in which people prepare for such disasters is not usually covered, particularly at Key Stage 3.

The proposed National Curriculum at Key Stage 3 states that pupils, in investigating tectonic processes and their effects on landscapes and people should be taught: (a) global distribution of tectonic activity and its relationship with the boundaries of plates, (b) the causes and effects of earthquakes and/or volcanic eruptions, (c) human responses to the associated hazard. In investigating geomorphologic processes and their effects on landscapes and people, pupils should be taught: (a) the processes responsible for the development of selected landforms and the role of rock type and weathering, (b) the causes and effects of a hazard (e.g. flooding, landslides), and human responses to it. These two themes 'tectonic processes' and 'geomorphologic processes' are two of 10 themes for Key Stage 3 and are the main vehicles for teaching about disasters and the only themes that refer directly to teaching about hazards. Weather related disasters such as hurricanes are not so widely taught but where they are is under the theme of 'weather and climate', although they are not stipulated. Because 'disasters' come under the auspices of the theme of 'tectonic processes', other types of and more long term disasters are not taught.

③ Geography at 'A' Level:

Although all 'A' level courses include modules that incorporate teaching about natural disasters in one context or another, these modules are not always compulsory. Although disasters are still looked at from the physical geography viewpoint, some teachers do try to emphasize the human side of such events. In an article in *Teaching Geography* in July 1996 Peter Gossman outlines an activity for 'A' level students which focuses on the impact on people's daily lives and the challenge of weather and climate in relation to Hurricane Erin. Generally 'A' level syllabuses do allow for a more in-depth study of perceptions to hazards, forecasting, vulnerability and response, but this is usually somewhat abstract and academic.

④ Summary of Natural Disasters taught in Geography

1. Earthquakes	
Kobe in Japan	1995
Maharashtra in India	1993
San Francisco in USA	various
Armenia in Colombia	1999
Armenia	1988
Los Angeles	1994
2. Volcanoes	
Mount St Helens in USA	1980
Mount Pinatubo in the Philippine	1991
Montserrat	1995-1997
3. Flooding	
Bangladesh	1998

- 4. Hurricanes
 - Hurricane Mitch in Central America 1998
 - The Great Storm (UK) 1987
 - Erin, Florida 1995
- 5. Droughts
 - Sahel Early 1980

⑤ Resources

This section looks at the producers of teaching resources available to teachers and the different types of resources they produce. Nearly one third of Key Stage 3 Geography lessons are taught by non-specialists and therefore teachers can be very reliant on text books. Generally text books are of a high standard, beautifully illustrated and relevant to the National Curriculum. Some would argue though that they adhere too rigidly to the curriculum. There is certainly a large degree of uniformity particularly at Key Stage 3 in text books. NGOs produce resources which take a more cross curricular approach and therefore tend to place the teaching of disasters in a wider context.

40) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF USA

① California Department of Education

Pandemic Influenza Preparedness for Schools: When developing the Pandemic Influenza Preparedness Plan, California districts are encouraged to consider how such an emergency might affect the school facilities. Issues such as school closings, accommodation of students with special needs, schools designated as contingency hospitals, establishing policies for transporting ill students, modified maintenance practices during an emergency epidemic or pandemic to reduce or slow the spread of the disease, storage of adequate supplies (food, water, cleaning supplies, soap, hand towels, etc.), and removal of trash during a break-out, etc.

It also provides a checklist for earthquake safety measures for school children and teachers. A special booklet containing a checklist for emergency management has been prepared for teachers.

② National Clearinghouse for Educational Facilities, Washington, D.C.

A checklist that combines the nation's best school facility assessment measures into one online source for assessing the safety and security of school buildings and grounds. It includes over 400 measures covering school surroundings, school grounds, buildings and facilities, communications systems, building access control and surveillance, utility systems, mechanical systems, and emergency power. The checklist is updated frequently and may be used for planning and designing new facilities or

assessing existing ones.

③ Arizona Dept. of Education, Arizona Division of Emergency Management, Phoenix

Arizona School Site Emergency Response Plan Template provides school districts with comprehensive guidelines to follow in case of any of nineteen types of emergencies. Checklists, communication instructions, staff responsibilities, job descriptions, and a wide variety of forms for inventory, release, skills assessment, and site review are included.

④ Florida Department of Education, Office of Educational Facilities, Tallahassee

Natural Disaster and Crisis Management in School Districts and Community Colleges provides preparation, assessment, and recovery advice for schools, covering a wide variety of natural and man-made disasters. Instructions for pre-planning, insurance, emergency sheltering, command centres and disaster team organization, emergency communications, security are provided, along with specific procedures for before, during, and after the event.

This document provides school districts and community colleges in Florida with guidance on disaster preparedness planning and management for all types of disasters. Procedures include those for insurance coverage, emergency shelters, command centres and disaster team organization, emergency communications, security, preparation prior to disaster, damage assessment, extended use of schools as emergency shelters, emergency construction and restoration, and actions during and after a disaster event. Also included are issues and procedures dealing with Post Traumatic Stress Syndrome.

⑤ Federal Emergency Management Agency

Guidelines on how schools can become more disaster resistant: Resources for parents and teachers are provided in booklets. It follows the FEMA recommendations for the following actions for all school officials: 1) Identify hazards likely to happen to your schools; 2) Mitigate against the hazards; 3) Develop a response plan, including evacuation route; 4) Plan for coping after a disaster; and 5) Implement drills and family education.

⑥ Organization for Economic Cooperation and Development, Paris

OECD Recommends safety guidelines for co-operation and development's position on school earthquake safety, outlines the principles of school seismic safety programs, and details recommended elements of such programs, which include policy, accountability, building codes and enforcement, training, preparedness, commu-

nity awareness and participation, and risk reduction.

⑦ Department of Homeland Security's Federal Emergency Management Agency (FEMA, Washington, D.C.)

A multi-hazard emergency planning for schools: This on-line, independent study course will help educators and first responders develop effective emergency operations plans for the wide array of potential emergencies that schools face. The course describes emergency management operations, roles and duties, explains how to assess potential hazards that schools may face, and explains how to develop and test an Emergency Operations Plan that addresses all potential hazards.

FEMA also published and recommends design guide for improving school safety in earthquakes, floods, and high winds. It provides design guidance for the protection of school buildings and their occupants against natural hazards, concentrating on K-12 facilities. The focus is on the design of new schools, but the repair, renovation and extension of existing schools, as well as the economic losses and social disruption caused by damage from these three hazards is also addressed. Two core concepts emphasized are multi-hazard design, where the characteristics of hazards and how they interact are considered together with all other design demands, and performance-based design, where the specific concerns of building owners and occupants are considered over and above what is covered in the building code. It also addresses present issues common to all hazards. The risk management for each of the three specific hazards are covered in specific.

⑧ Caribbean Disaster Emergency Response Agency; European Humanitarian Office Disaster Preparedness Programme

This is concerned with the policies, practices, and appropriate measures that can be taken to anticipate and reduce the hazard on a community. Included are a select list of books, articles, pamphlets, brochures, posters, and other items on hazards, risks, and disasters that are held in disaster management agencies in the Caribbean. The selections take into consideration the interdisciplinary approach of developing an understanding and a greater awareness of natural hazards and disasters. It is intended for teachers to use a source to locate materials for their lessons on disasters. Many of the items are annotated and indicate the age group for which they are most appropriate.

⑨ Arkansas Centre for Earthquake Education and Technology Transfer

A guidebook was developed to help school personnel create, supplement, and revise their earthquake emergency procedures. It includes information on legal requirements, how to start a preparedness process, earthquake response procedures, non-structural hazard identification and reduction, stocking supplies, conducting drills, and completing a post-earthquake damage evaluation process.

The Arkansas Centre for Earthquake Education and Technology Transfer has compiled educational, curriculum, and preparedness resources for teachers and administrators for preschools and kindergartens through senior high.

⑩ Southern California Earthquake Preparedness Project, Los Angeles, CA

A brochure provides a checklist highlighting the important questions and activities that should be addressed and undertaken as part of a school safety and preparedness program for earthquakes. It reminds administrators and other interested parties on what not to forget in preparing schools for earthquakes, such as staff knowledge needs, evacuation planning, non-structural hazards to be addressed, communication system needs, and vital records protection. Also listed are emergency response actions to remember. The brochure also contains a legislative checklist of what public school administration need to do to in their schools earthquake preparedness to make sure they comply with all the provisions of state legislation.

41) DISASTER MANAGEMENT CURRICULUM IN SCHOOLS OF VENEZUELA

No information about disaster management curriculum in school available. However as per the UNDP report there exist curriculums at primary school level. The country has produced a national report to the World Conference on Disaster Reduction 2005, with some information of curriculum on disaster management at school level. The report could not be referred as it is not provided in English.

1.2 University Curriculum around the World

(1) Introduction

1) BACKGROUND

The disaster management curricula at college and university level across the world are widely varying in its content depending on the context and objectives of the program. Most programs are intended to produce

specialists in disaster management who can pursue this field as a career. Some of the programs also appear to be focused on in-service training or for orientation of professionals in other fields with concepts of disaster management. The disaster management courses are available at the following levels:

1. Diploma level programs.
2. Undergraduate degree level programs.
3. Graduate degree level programs.
4. Certificate programs.

This section presents the analysis of the detailed information collected on disaster management studies in various colleges and universities worldwide. For analysis purpose fact-sheets have been prepared for each program and presented in this report. In all fourteen different aspects of disaster management are considered for the evaluation of each individual program. The evaluation has defined five levels for indicating the depth of coverage of the aspect under evaluation. These levels are as follows:

- A+ : Aspect covered to advanced level
- A : Aspect covered to medium level
- A- : Aspect covered to basic level
- N : Aspect not covered
- NI : Information not available

The fact sheets give the idea about how many aspects of disaster management are included in the curriculum of the program and to what extent these are covered. Further bar charts have been prepared to give the overall of picture of disaster management curriculum at different levels of education including diploma, undergraduate and graduate levels. These bar diagrams quickly indicate how many universities/programs are covering the particular aspects and to what depth of knowledge.

2) MAJOR OBSERVATIONS

The diploma level programs appear to be intended primarily for city or community disaster managers whose prime responsibilities include implementation of disaster management plans and not in formulating them. It is observed that in a number of colleges and universities, aspects like causes and effects of disasters, disaster risk mitigation, preparedness, rehabilitation, and GIS have been covered to advanced level. The indirectly oriented topics that are useful for planning disaster management strategies, such as business continuity, emergency planning and emergency medical services, have been given comparatively less attention. It is also observed that for a large number of universities, ade-

quate information regarding topics covered in the curriculum is not available on the internet. Also in case of distance learning diploma courses, the disaster management topics have not been included to considerable depth.

The undergraduate level programs appear to be geared towards the specialization of emergency management. Disaster management has been included as one component of emergency management. The focus of these programs is producing professionals who can plan and implement emergency management plans. The long-term disaster management aspects such as reconstruction and rehabilitation, business continuity, and emergency medical services have generally not been considered with adequate depth. Topics related to emergency planning have been covered to advanced level.

The graduate level programs seem to be geared towards even more specialization in emergency management when compared to the undergraduate programs. At graduate level curriculum the most ignored aspects are causes and effects of disasters, information systems and communication, business continuity and emergency medical services. Emergency planning aspect has been covered to advanced level in almost all the universities.

The certificate programs are intended to spread awareness of the topics of disaster management among the participants. These programs are generally geared towards participants with a broad spectrum of specializations. The certificate programs are generally of very short period of one week or a few weeks. The certificate programs are offered around the year and are mainly intended to acquaint the participant to the various paradigms of disaster management.

It is observed that inadequate consideration has been given to the lessons from the past disasters. Case studies are included in the curriculum in many universities for learning about the practical situations in emergency. But lessons that can be used as a guide for improvising the emergency management strategies in future need a great deal of attention.

The United States of America has the largest number of disaster management programs, representing the maturity of this field in that country. Several universities in USA have included disaster management education in their curriculum at all levels. In some other countries like United Kingdom, Canada, Australia and New Zealand considerable attention is paid to the disaster management education. But the countries like Nepal, India, South Africa, Turkey and Bangladesh have only one or two universities contributing to the emergency management curriculum.

(2) Analysis of curriculum

1) INTRODUCTION

In many universities all over the world disaster management is a part of curricula at different levels such as at diploma, undergraduate and graduate level. In addition, a large number of programs are also offered for certificate courses that do not lead to a diploma or a degree.

2) DIPLOMA LEVEL PROGRAMS

It is observed that very few universities have diploma courses on disaster management. In United States only a few universities have diploma courses on disaster management. The information available from internet does not provide full details of the aspects covered at diploma level. The summary of the programs are given in Figures 1 and 2. From the information available, it is seen that causes and effects of disasters, risk mitigation, preparedness and GIS are the main focus of such courses. It is also seen that not much attention has been given to emergency planning, communication, medical services and business continuity aspect.

3) UNDERGRADUATE LEVEL PROGRAMS

The undergraduate level program is offered at a large number of universities, mainly in the USA. There are a few more programs in Canada and United Kingdom. It is observed that the universities prefer to include emergency management as a minor with public administration or

bachelor of sciences programs. At undergraduate level the areas like communication, business continuity and emergency medical services have been paid little attention by most of the universities. All other aspects are covered to advanced, medium and basic level at different universities. The summary of the program is given in Figures 3 and 4 for on-campus and distance learning programs.

4) GRADUATE LEVEL PROGRAMS

At graduate level overall contribution from different countries is good but the number of universities offering courses at master's level is low. At graduate level emergency planning aspect has been covered to advanced level in almost all the universities. The aspects which are not covered in most of the universities are causes and effects of disasters, business continuity and emergency medical services. The summary of the programs is given in Figure 5.

5) CERTIFICATE PROGRAMS

Apart from undergraduate and graduate programs, many universities offer short duration certificate courses. Universities and colleges in Canada offer the largest number of such programs. In certificate courses, the main focus is on the aspect of response to disasters, rescue and relief. The summary of the programs is given in Figure 6.

Examples used for the analysis in this section are quoted in Appendix 3.

University curricula around the world

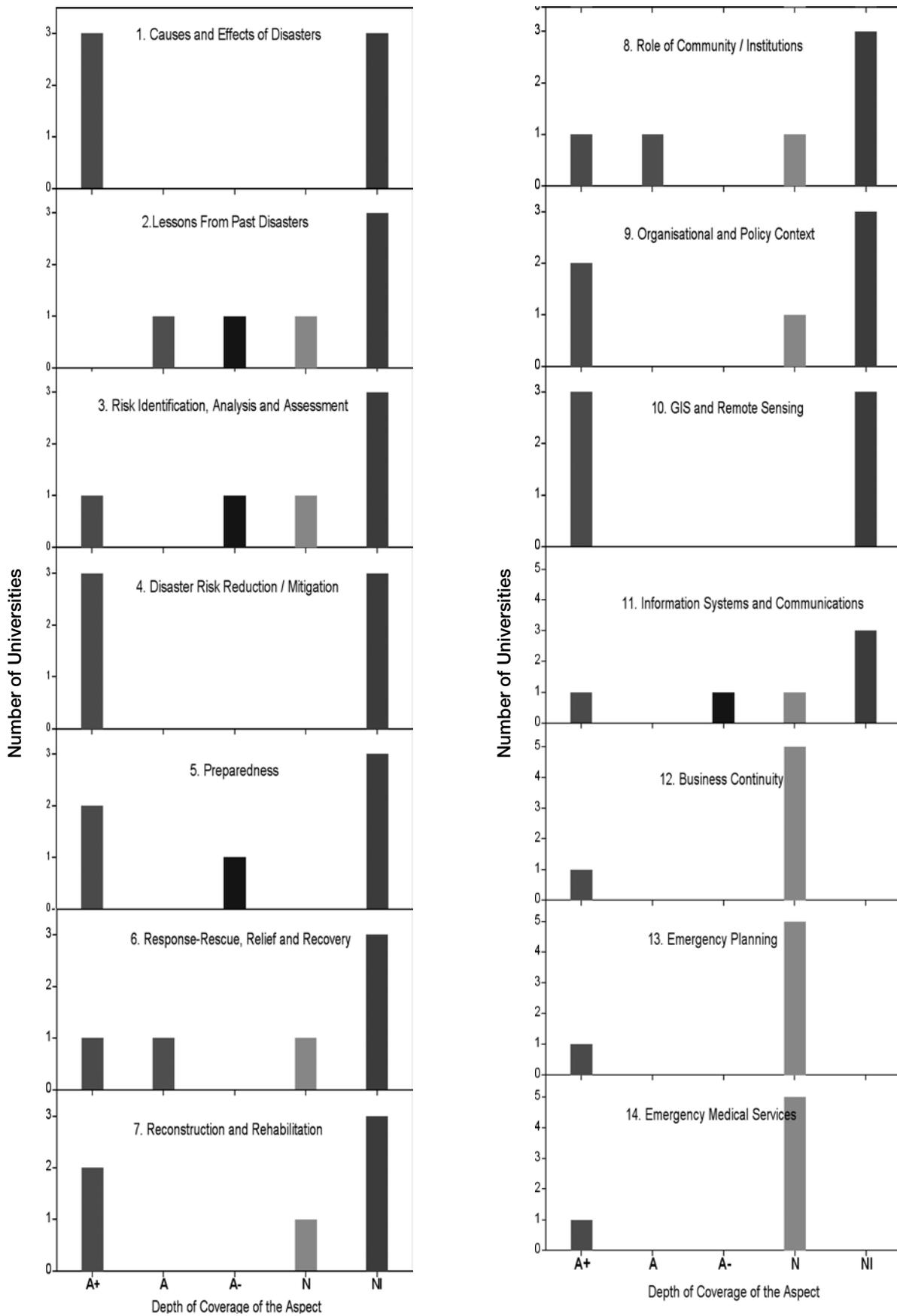


Figure 1 Analysis for Diploma On-Campus Courses.

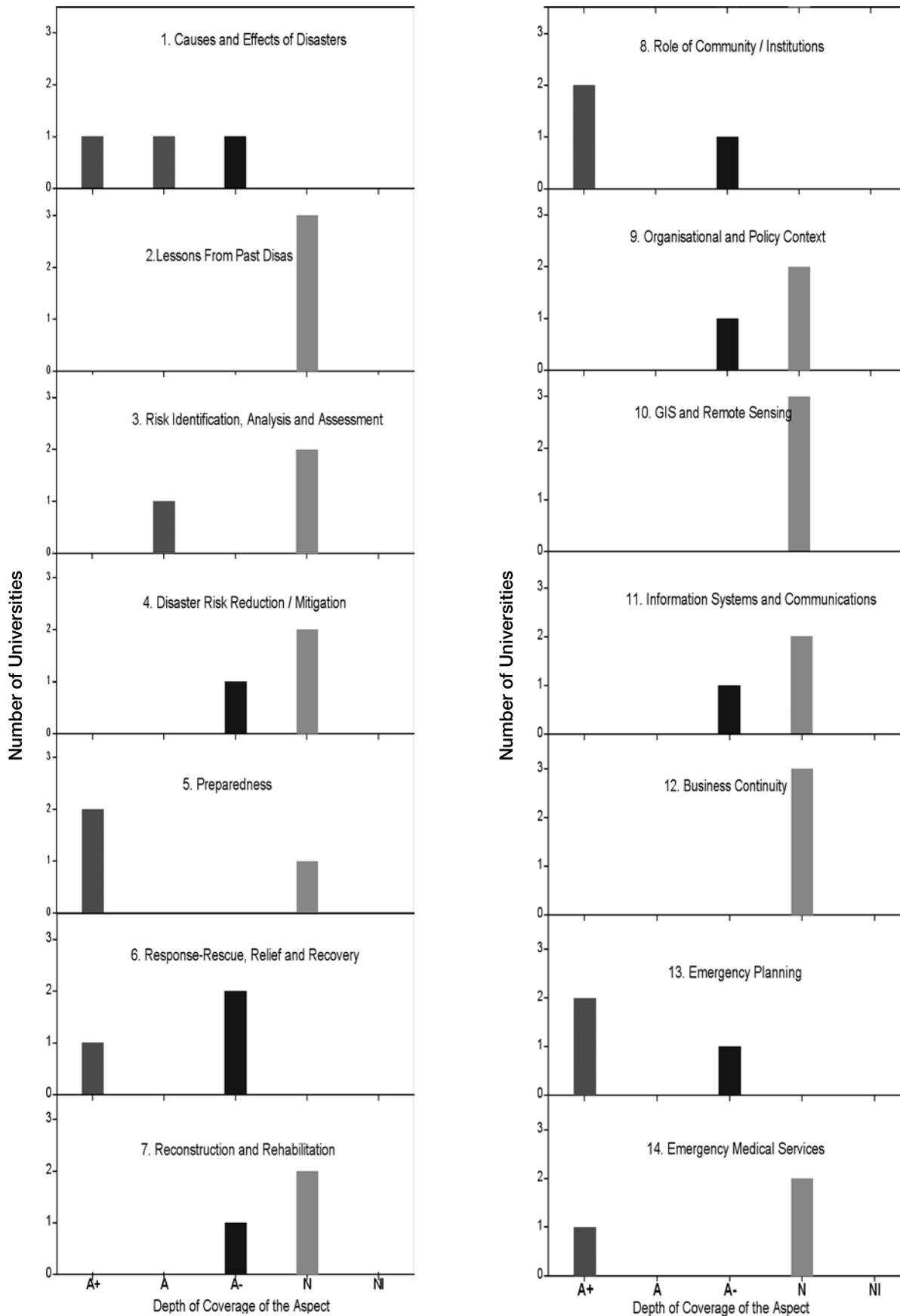


Figure 2 Analysis for Diploma Distance Learning Courses.

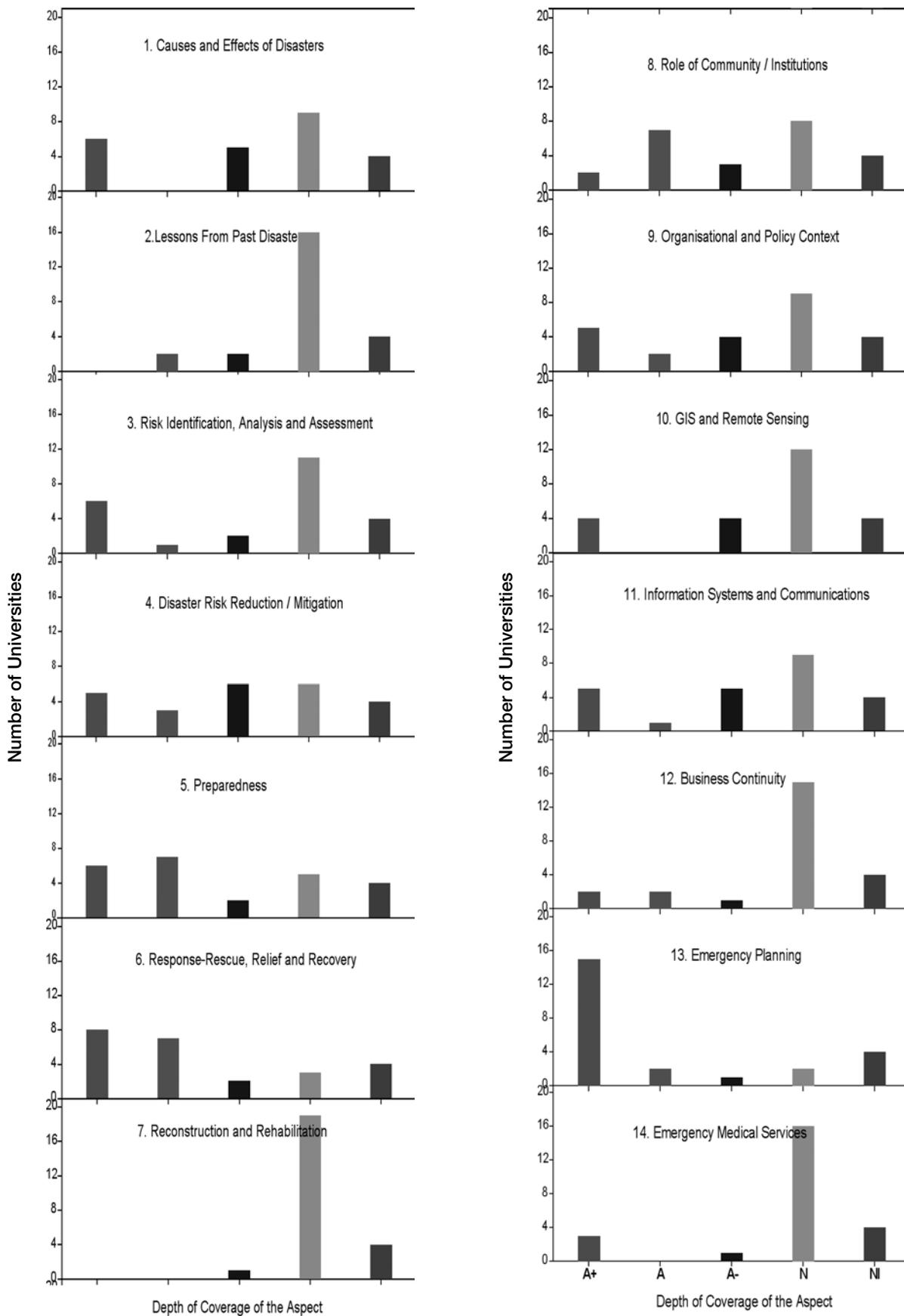


Figure 3 Analysis for Undergraduate On-Campus Courses.

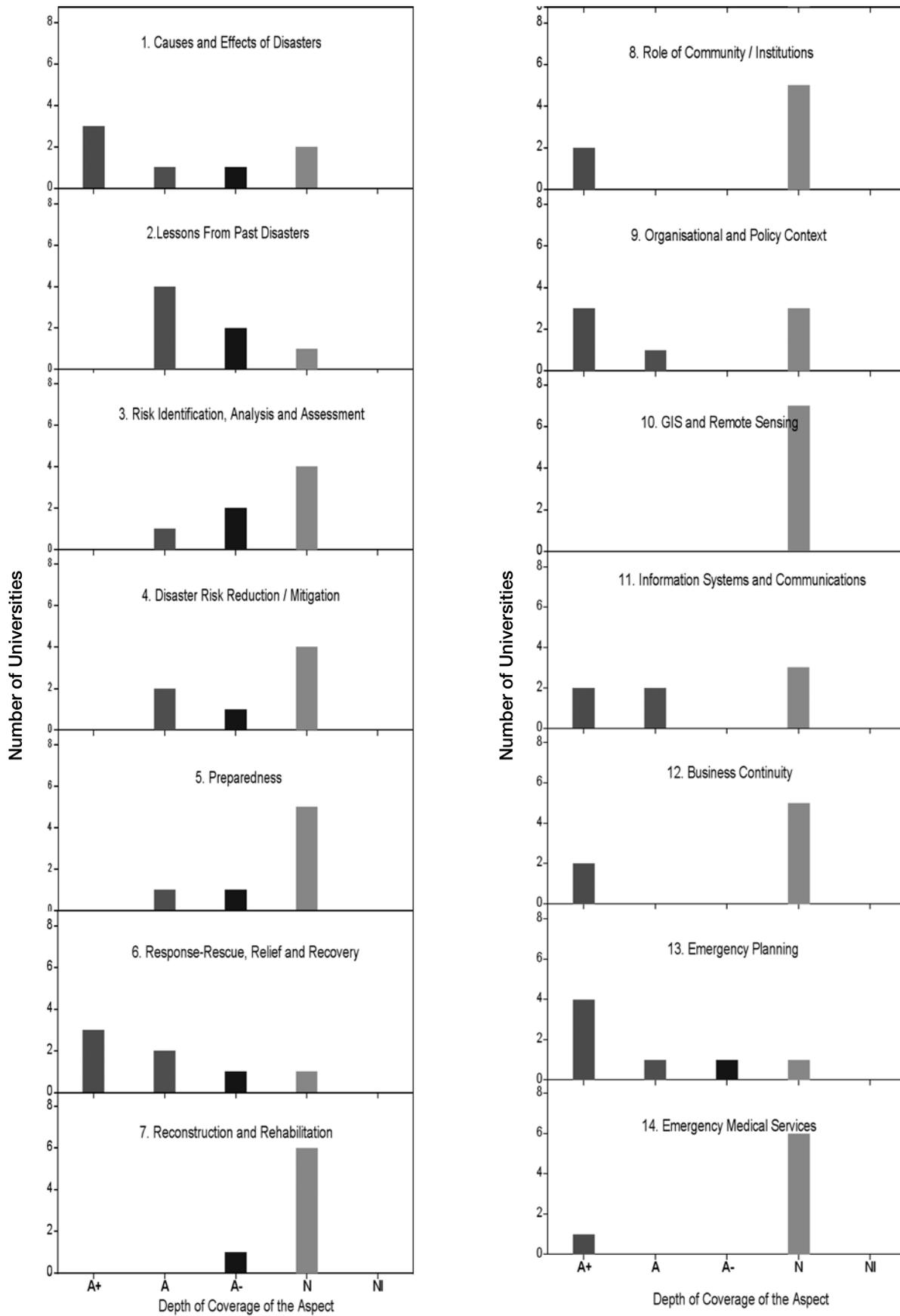


Figure 4 Analysis for Undergraduate Distance Learning Courses.

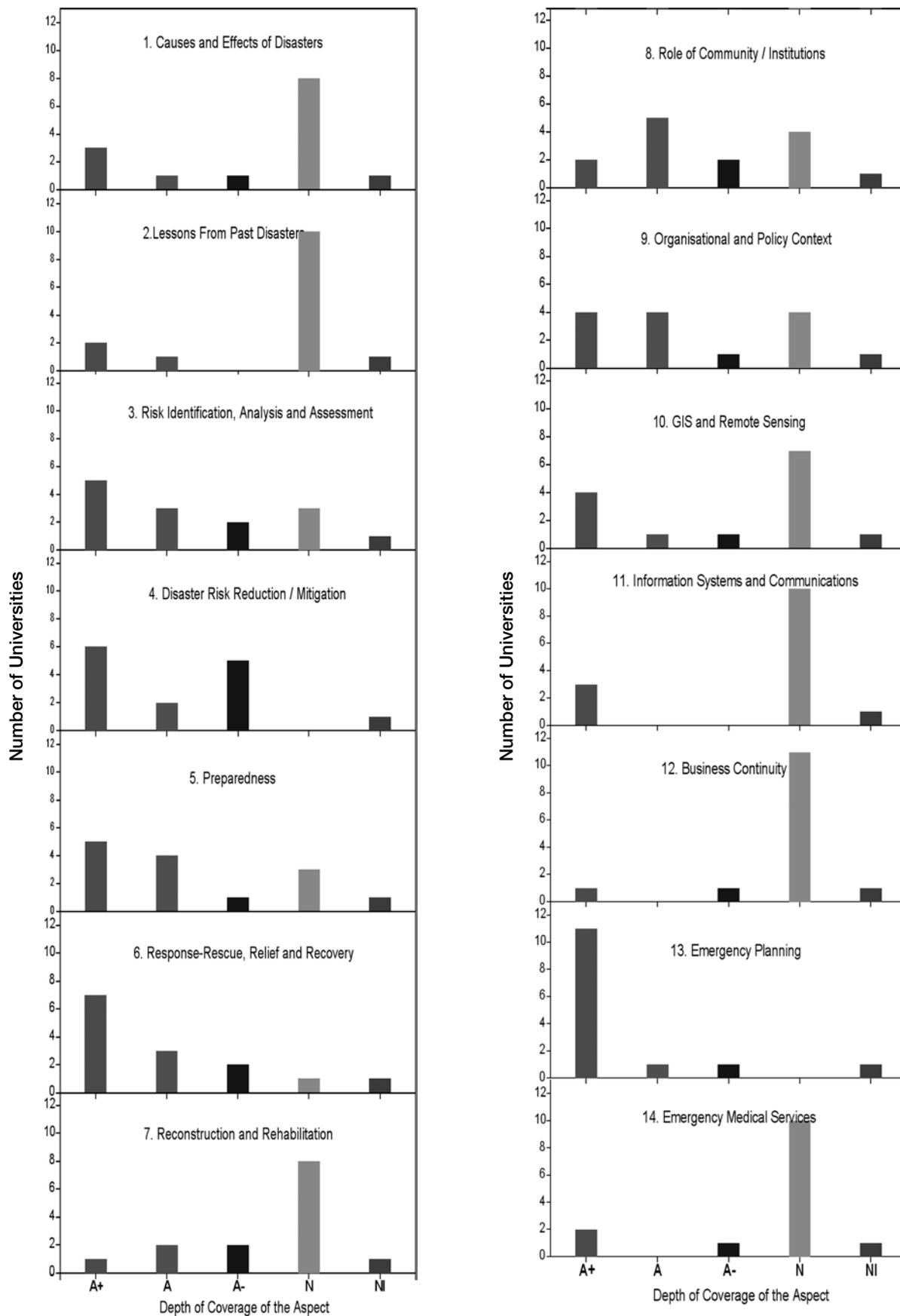


Figure 5 Analysis of Graduate Courses.

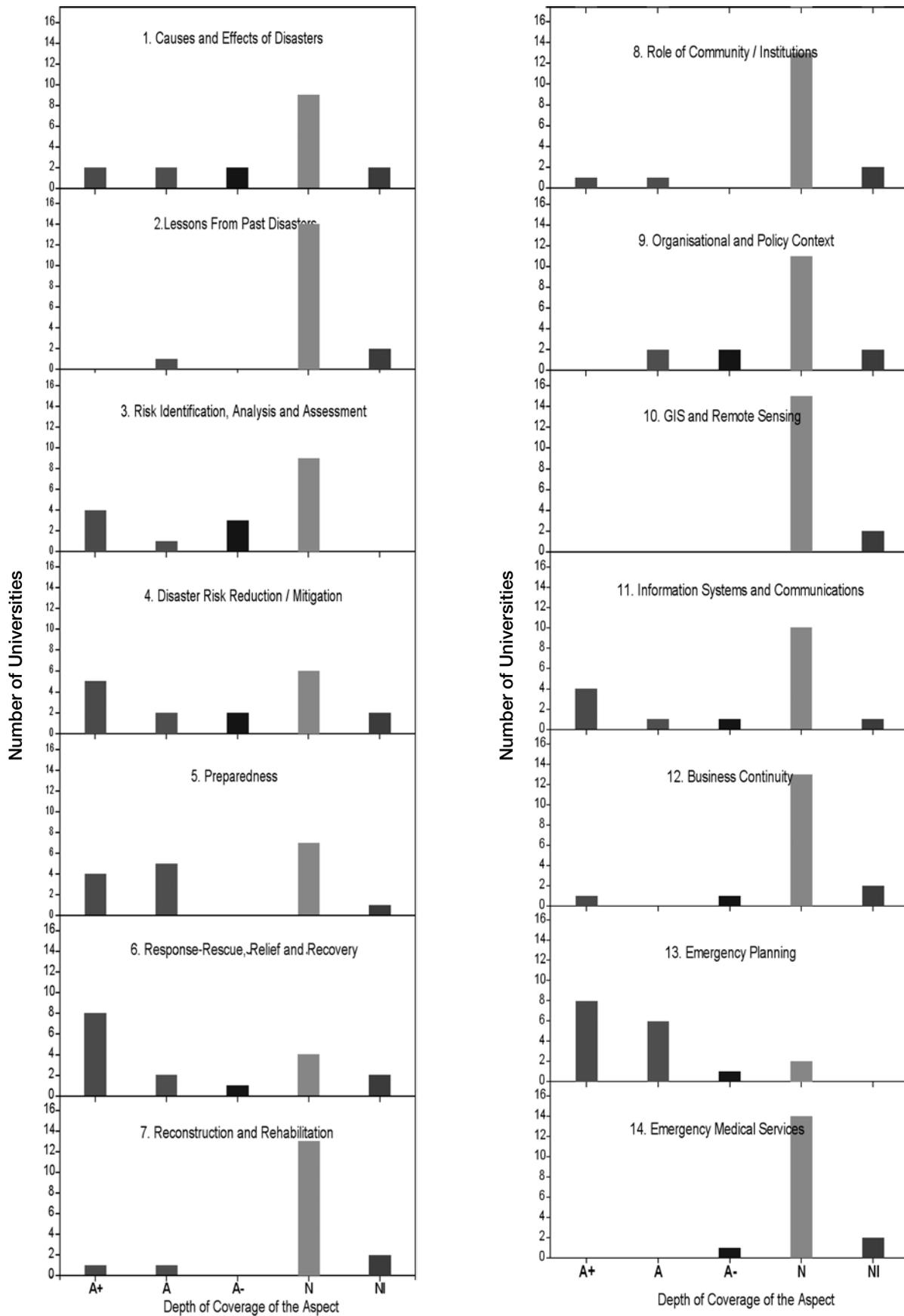


Figure 6 Analysis of Certificate Courses.

1.3 School Curriculum in INDIA

(1) Introduction

1) BACKGROUND

India experiences a large number of disasters every year. The major disasters that have occurred during recent years include earthquakes, cyclones, tsunamis, floods, droughts, landslides and industrial accidents resulting in the loss of a large number of lives and injuries to countless others. It has been seen that the disaster of different types and nature occur at frequent intervals. Following the Bhuj Earthquake of 2001 in which a very large number of schools were destroyed and students and teachers were affected, the Government of India decided to focus on disaster education in schools in order to inculcate a culture of safety among the students and teachers.

The school system in India is divided into a number of school boards. Some school boards are operating at national level and have member schools in many part of the country. Most school boards are state-specific and their member schools are confined to that particular state only. The curricula of the schools are decided by the school boards, and the school completion examinations (after 10 and 12 years of schooling) are also conducted by the board. The largest national school board is known as the Central Board of Secondary Education (CBSE) with around 9,000 schools affiliated with it. The CBSE is an autonomous education board of Government of India and is often considered to be the most important school board in India.

The CBSE has introduced disaster management as a part of Social Sciences course in class VIII, IX and X since 2004 for all students. These courses cover a wide range of hazards, their consequences and mitigation and preparedness measures. Since the courses have been introduced at a relatively senior level, these courses are expected to also reach out to the families of the students. In addition, the CBSE has introduced elements of disaster management as a part of Environmental Studies course in class V. The CBSE has also introduced disaster management as a unit subject in Geography for class XI students. After class X, the students under CBSE board have the option of choosing major streams of further education (such as science, commerce, etc.) and the subject Geography is available to only those students who chose this subject. In addition, the CBSE has embedded some topics related to disaster management in class V.

The Government of India has also requested other school boards to include disaster management courses in their curriculum at appropriate levels. The Council of Board of School Education (COBSE), a voluntary

association of 51 school boards is in the process of taking up the implementation of disaster management education in schools.

One of the other major national boards, the Council for the Indian School Certificate Examinations (ICSE), has also introduced topics of disaster management in class IX. The ICSE board includes over 600 private schools that are mainly located in major urban areas.

Some states have also introduced state-level initiatives for disaster management in their schools. The best known instances of state-level disaster management education at school level are in Orissa and Gujarat. Orissa had experienced a major cyclonic storm in 1999 while Gujarat suffered the Bhuj Earthquake in 2001, and the level of public awareness in both these states is relatively high.

This report describes the school education initiatives of the CBSE in details, followed by the salient features of school disaster management education of the ICSE board, and in Orissa and Gujarat.

(2) Central Board of Secondary Education (CBSE)

1) DISASTER MANAGEMENT CURRICULUM IN CLASS V

The disaster management curriculum in Class V introduces the basic concepts of the most commonly occurring disasters in India, viz. earthquake, flood and draught. The main objectives of the Class V curriculum on disaster management (as a part of Environmental Studies subject) are:

1. Acquaint students about some major disasters that have occurred in India recently, such as earthquakes, floods and drought. The emphasis is on understanding the consequences of these disasters, their mitigation measures and communicating that these are due to naturally occurring physical processes.
2. Introduce the students to the role of governmental, international and local organisations after a natural calamity. In addition, the important role of local people is also emphasised.

The different elements of the Class V curriculum have been summarised in Table 17, and are as given below:

① Earthquakes

The topics included for earthquakes include:

- The Gujarat earthquake of 2001 and its aftermath.
- Reasons for occurrence of earthquakes.

- Measuring size of earthquakes.
- Simple Do's and Don'ts.

② Floods

The topics included for floods include:

- Causes of floods - Cyclones and Typhoons are also included as one of the causes of floods.
- Effect of floods on normal life of the people.
- Methods to control floods.
- Means to reduce the effect of floods (mitigation).
- Simple Do's and Don'ts.

③ Droughts

The topics included for droughts include:

- What is a drought.
- Factors causing droughts.
- Effect of draught on people - who gets affected the most.
- Means to reduce the incidence of drought.
- Introduction to water harvesting.
- Simple Do's and Don'ts.

2) DISASTER MANAGEMENT CURRICULUM IN CLASS VIII

The disaster management curriculum in Class VIII introduces the concepts of hazard, vulnerability, risk and disaster management. The disaster cycle is not explicitly discussed in this class. The main objectives of the Class VIII curriculum are:

1. Acquaint students about various disasters that India is vulnerable to, and the hazard maps that enable them to visualize their vulnerabilities. (Emphasis would be on the effects rather than causes, since the geographical reasons for the occurrence of natural hazard dealt with in geography).
2. Introduce a few key concepts in disaster management, in simple terms, to orient them to these words that are used in media, discussions, analysis, etc, when a disaster strikes. The questions at the end of each lesson would provide a guide to teachers on what the learning expectations are from students, and in setting examination papers.
3. Introduce the concepts of being prepared for disasters through simple do's and don'ts that school children can imbibe and spread to families and community. Introduce also the concept of preparedness leading to reduce vulnerability and possible reduction in impact of the disaster on lives, livelihoods and property.
4. Develop an interest in the subject through interactive activities in the classroom, so that students seek more information on disasters.

The curriculum includes concepts in disaster management, with emphasis on disaster preparedness. Both natural and manmade disasters are included in the curriculum. The concept of community Contingency Plan and importance of mitigation measures are also introduced.

The different elements of the Class VIII curriculum have been summarised in Table 18, and are as given below:

① Earthquakes

The topics included for earthquakes include:

- Causes and effects.
- Relative disaster vulnerabilities among people.
- Earthquakes in India, introduction to seismic zones and related damage, scales for measurements.
- Preparing for earthquakes.

② Cyclones

The topics included for cyclones include:

- Causes and effects.
- Cyclone-prone areas in India.
- Preparing for cyclones.

③ Floods

The topics included for floods include:

- Causes and effects.
- Flood-prone areas in India.
- Preparing for floods.

④ Drought

The topics included for drought include:

- Concept of slow-onset disasters.
- Causes and effects.
- Drought-prone areas in India and relatively vulnerability of people.
- Mitigation drought and preparedness.

⑤ Man-made Disasters

The topics included for man-made disasters include:

- Types of man-made disasters (accidents, nuclear, chemical, biological), concept of WMD.
- Simple Do's and Don'ts.

3) DISASTER MANAGEMENT CURRICULUM IN CLASS IX

The disaster management curriculum in Class IX is the second level formal introduction to disaster management studies. The main objectives of the Class IX curriculum are to teach about mitigating disasters such that their impact reduced, and possibility of preventing hazards from becoming disasters. Introduction to the community based disaster management, disaster management plans for schools are taught. The contents of the curriculum are as follows

1. Part I - Getting Acquainted with Disaster Management
 - Chapter 1: Becoming a disaster manager, under-

standing key terms

- Chapter 2: Components of disaster management
- 2. Part II - Disaster Risk Reduction
 - Chapter 3: Introduction to disaster risk management - Understanding the disaster mitigation
 - Chapter 4: Specific hazards and management
- 3. Part III - Some Common Manmade Disaster
 - Chapter 5: Preventing common manmade disasters
- 4. Part IV - Community Based Disaster Management
 - Chapter 6: Community-based disaster management
 - Chapter 7: School planning for disasters

The different elements of the Class IX curriculum have been summarised in Table 19, and are as given below

① **Earthquakes**

- Onset-type and warning.
- Elements at risk.
- Typical effects.
- Main mitigation strategies.
- Student exercises: Find further information.

② **Landslides**

- Onset type and warning.
- Elements at risk.
- Typical effects.
- Main mitigation strategies.

③ **Floods**

- Onset-type.
- Warning.
- Elements at risk.
- Typical effects.
- Main mitigation strategies.
- Student exercises: Find further information.

④ **Drought**

- Onset-type and warning.
- Elements at risk.
- Typical effects.
- Main mitigation strategies.

⑤ **Cyclones**

- Onset-type and warning.
- Elements at risk.
- Typical effects.
- Main mitigation strategies.
- Student exercises: Find further information.

4) DISASTER MANAGEMENT CURRICULUM IN CLASS X

The curriculum in Class X intends to groom the students to handle disaster management. The curriculum tries to give hands on experience to student on various survival skills, which would save many precious lives in

emergencies. It also discusses various alternative communication systems. It gives introduction to safe construction practices and strengthening of existing buildings against earthquakes. It also outlines many Government and non-government bodies which play a major role in managing disaster and sharing public responsibilities. Planning for the disaster prevention is also included in the syllabus.

The curriculum of Class X appears to have been developed after the Great Indian Ocean tsunami in December 2004. The curriculum therefore provides special focus on tsunami, alternate communication system and the importance of advance planning for disaster management. The content of the curriculum is under the following broad headings:

Chapter 1- Introduction

Chapter 2- Tsunami- the killer sea waves

Chapter 3- Survival skills

Chapter 4- Alternative communication systems during disaster

Chapter 5- Safe construction practices

Chapter 6- Sharing responsibilities

Chapter 7- Planning ahead

The different elements of the Class X curriculum have been summarised in Table 20, and are as given below.

① **Tsunami-The Killer Sea Wave**

- What are tsunamis, important facts about tsunamis
- Detecting tsunamis, what to do before a tsunami, what to do during a tsunami, Coastal tidal gauges for predicting tsunamis, planning of evacuation routes.

② **Safe Construction Practices - Earthquakes:**

- Effects of earthquakes on buildings, ground movements.
- Protection Measures - Building configuration - foundation, control on openings in walls, vertical reinforcements, etc.

③ **Safe Construction - Landslides**

- Factors that cause landslides - natural factors, man-made factors.
- Most vulnerable homes, Protection measures from damage to buildings, Site selection, Signs and warnings, Preventive actions, Protection of vulnerable areas, Collection of runoff, Interception of surface water, Stabilisation of slopes, Barriers.

④ **Safe Construction - Floods**

- Most vulnerable homes, Effects on buildings, Protection measures from damage to buildings.

⑤ **Safe Construction - Cyclones**

- Most vulnerable homes, Effects on buildings, Protection measures for damage to buildings, Site selection, Platforms and orientation, Foundations, Wall openings, Glass openings, Glass panelling, Roof architecture.

⑥ Survival Skills

- Search and Rescue Skills, Defining Search and Rescue, Community as Local Rescuers, Outside Community Resources, Objectives of Search and Rescue Team, Team Composition, Duties of a Rescuer.
- Plan - Manpower/Equipment/Method.
- Precautions before, while entering and while moving inside damaged buildings.

⑦ Sharing Responsibility - Role of Local and State Bodies

- Managing disasters/ How disaster is managed.
- Response from the Centre/State/District/Block/Village bodies.
- Activity and planning as an example government official.
- Functions of some organisations - UN Disaster Management Team (UNDMT)-India, Indian Armed Forces, National Cadet Corps (NCC), Civil Defence, National Service Scheme (NSS), Nehru Yuva Kendras and Home Guard.

5) DISASTER MANAGEMENT CURRICULUM IN CLASS XI

The disaster management curriculum in Class XI has been introduced as a unit of Geography subject. The curriculum of this course is at a high level, and discussions the technical aspects of various hazards and disaster management concepts. The disaster management cycle is also discussed in detail in this course. The main objectives of the Class XI curriculum are:

- To acquaint students about the concepts of disaster management and the various terminologies used in this field.
- To describe the various natural hazards that occur and their consequences and mitigation measures.

The curriculum discusses the concepts in disaster management in much more detail than in the earlier classes, and includes the technical aspects of the various natural hazards. The curriculum also describes the occurrence of major natural disasters in India, their consequences and mitigation/preparedness measures.

The different elements of the Class XI curriculum have been summarised in Table 21, and are as given below:

① Earthquakes

The topics included for earthquakes include:

- Causes, including plate tectonics, and measures of earthquakes.
- Adverse effects of earthquakes.
- Seismicity and seismic hazard in India.
- Risk reduction measures, community preparedness, planning public education, and engineering countermeasures.

② Tsunami

The topics included for tsunami include:

- Causes and warning systems.
- Adverse effects.
- Tsunami-prone areas in India.
- Risk reduction measures.

③ Cyclones

The topics included for cyclones include:

- Causes and warning systems.
- Adverse effects.
- Cyclone-prone areas in India.
- Risk reduction measures.

④ Floods

The topics included for floods include:

- Causes.
- Adverse effects.
- Flood-prone areas in India.
- Risk reduction measures.

⑤ Drought

The topics included for drought include:

- Concept of slow-onset disasters.
- Different types of droughts.
- Causes and drought measurement.
- Adverse effects.
- Drought-prone areas in India and relatively vulnerability of people.
- Mitigation of drought and preparedness.

⑥ Landslide

The topics included for landslide include:

- Causes.
- Different types of landslides.
- Adverse effects.
- Landslide-prone areas in India.
- Risk reduction measures.

(3) Council for the Indian School Certificate Examinations Curriculum

The Council for the Indian School Certificate Examinations (ICSE) board has introduced topics of disaster management in class IX Geography subject of their curriculum. The curriculum introduces the students to earthquake and tsunami. The topics include

concepts of earthquake ground motions, the waves generated by earthquakes, destructive effect of various earthquakes. It introduces the Kolkata earthquake of 1787 in which over 300,000 people perished.

(4) Gujarat School Curriculum

1) STATE BOARD SCHOOL CURRICULUM

The state of Gujarat experienced a major earthquake in the year 2001. A very large number of school children died in school building collapse. The Government of Gujarat has initiated a comprehensive disaster management program for schools as a part of post-earthquake disaster management program. In association with state primary education board, the government has conducted following awareness camp in a large number of the schools. Some of the highlights of this initiative are:

- Basic awareness of earthquake for all students, 2 day training in first aid, fire safety and search and rescue, which have been completed in nine state board schools.
- Conduction of earthquake drills completed in seven schools.
- Awareness campaigns through plays/folklore and screening of educational films Completed in four schools.
- Initiation of Schools Safety Clubs has been completed in nine schools.
- Non structural mitigation completed in two schools.

2) SCHOOL DISASTER MANAGEMENT INITIATIVES

The state government, in association with the World Bank and several expert organisations, has initiated a major program to introduce disaster management culture in the schools of the state. This initiative is not limited to the state board schools, and the schools for various national boards are also allowed to participate. The program, known as the Gujarat School Safety Initiative (GSSI) has been running for about 2 years now.

The main objectives of this program are not just to initiate disaster management education, but to also help the schools prepare their students for various disasters and other emergencies. The program intends to select 150 schools in the state (49 are already selected), and institutionalise disaster management awareness, planning, mitigation and preparedness in these schools. The components of the program include training of trainers among teachers, development of safety plans for the schools, establishment of disaster management committees, training and demonstration of do's and

don'ts, planning of evacuation strategy, etc. The GSSI focuses on the school as a whole and while formal education of students is not explicitly stated, the program structure requires involvement of all students in the school for its success.

(5) Orissa School Curriculum

The Government of Orissa through its Mass Education department has introduced disaster management concepts in the syllabus of Class VIII. The state board schools and Mass Education department have been instructed to also introduce disaster management curriculum for Class IX and X. A textbook titled "Bipati, Biparjay O Surakhya" in Oriya language has been brought out for school children.

(6) Other State School Curricula

Several other school boards in various states have introduced topics related to disaster management as a part of their curriculum. Most of these topics are included in social sciences or science course depending on the technical content of the information. However, these other boards do not have a sequence of topics focussed on disaster management like the CBSE. These boards also do not identify this information as relevant for disaster management since the concept of disaster management is not introduced in the curriculum anywhere.

(7) Conclusions

The CBSE schools have introduced the disaster management concepts for all students at class VIII, IX and X level and for some students in class XI. The students are introduced to the different hazards and their consequences. In the initial stage, they are mainly introduced to the do's and don'ts so that they and their families can be better prepared to face these disasters. In later classes, the more advanced concepts are introduced, including the concept of community-based disaster management. The mitigation measures for different disasters are also introduced at this stage. The text books also provided list of a large number of internet resources that they students can peruse for further information.

Most of the CBSE schools are located in urban areas, and hence maximum benefit of the disaster management curriculum is transferred to the urban school chil-

dren and their families. In smaller towns and cities and in rural areas, most schools are affiliated to the state boards, who are not introduced to disaster management concepts to the same depth. This dichotomy is expected to be resolved after the COBSE boards also adopt disaster management in this curriculum.

2. Disaster Education for Common People

Amod Mani Dixit
National Society for Earthquake Technology-Nepal (NSET)

(1) Introduction

The main objective of this research is to collect information on disaster education of ordinary people at community level, mainly through internet and publications. Specifically there were two objectives as:

- Identify various methodologies for disaster education of ordinary people that are applied over the world
- Study in detail what kinds of disaster education are carried out in Nepal as a case study

National Society for Earthquake Technology-Nepal (NSET) conducted the research on Education of Ordinary People at Community Level in developing countries. Case study on disaster education for common people in Nepal was also carried out.

Part I: Internet Search for the Practice of Disaster Education to Common People

1) METHODOLOGY

Global search engines like www.google.com, www.yahoo.com, local search engines like www.google.com.id as well as USAID's internal search engine www.usaid.gov were used to search for data of disaster community education.

Initially the search for information was very difficult because only such keywords as disaster community education Indonesia or community education disaster were used. But as more information was discovered, such search criteria as disaster community education (with keyword "community education" must be present in the page). Country names were also added in the search criteria in order to narrow down the search. Local search engines were also used, such as www.google.com.id. Several donor agencies such as USAID (www.usaid.gov) and disaster reduction agencies (www.adrc.org) were searched because such sites provided detail (in terms of the program period, budget, etc.) information about the implementation

programs.

2) TYPES OF INFORMATION AVAILABLE

When the keyword disaster was included in the search criterion, most of the results were about news about some form of disaster, mostly about how big international institutions like Red Cross conducted some relief work. But these pages were mostly for general public notices, appeal for donations and supports; they did not contain information about disaster community education. If keywords like disaster community education were included in the search criteria, results were about proposals that community education was necessary in case of disasters, of recommendations about disaster community education. Less than 10% of the search results were descriptions of some disaster community education projects.

Detail descriptions of some community education projects were scarce. Some of the programs or projects were of larger scale, with disaster community education being a small part of it which is also discussed in sections below. Much time is needed to look into these available documents to extract the information to fill the database.

3) ANALYSIS OF THE DATA

All the relevant data was downloaded for different programs/projects/cases. The summary of all the cases are presented in tabular format. For readers who want to learn more on certain programs/projects, websites given at the end of column. The final results in terms of geographical coverage, number, nature and time of the programs/projects, implementing group hazard coverage, funding agencies and methods of education are summarized in the table.

4) GEOGRAPHICAL COVERAGE AND THE NUMBER AND NATURE OF PROGRAMS

① Geographical Coverage and the Number of Programs/Projects

The study identifies 189 relevant case studies from 31 countries in Asia and 1 case from 11 countries in South

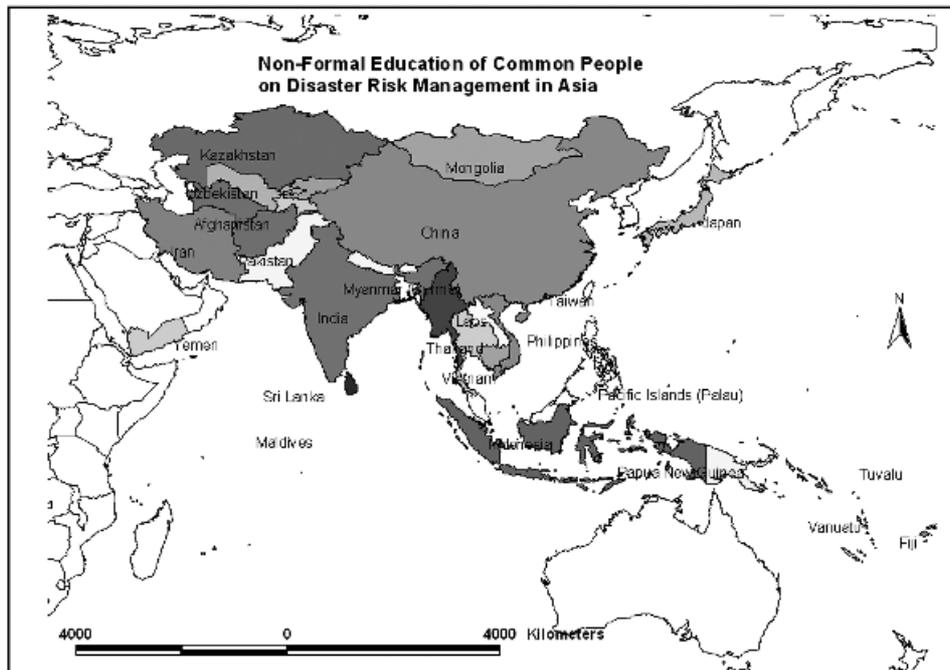


Figure 1 Geographical Coverage of the Countries Covered by the Study

Pacific regions. On the basis of geographical coverage, two types of projects/program were identified. One, existing in single country (for example, United Nation Development Programme (UNDP) country programs or Asian Disaster Preparedness Centre (ADPC) training courses, conducted in single country. The other type of programs/projects covers two or more than two countries. The former category includes 162 programs/projects while the latter includes 25 programs/projects. Most of programs especially from UNDP and European Commission Humanitarian Office (ECHO)/Disaster Preparedness ECHO (DIPECHO) contain several projects under each country's program.

Among the identified case studies, highest number of programs/projects that focused on disaster education was found in the Philippines (26 programs) followed by Japan (22 programs), Thailand (19 programs), India (18 programs) and Indonesia (17 programs).

High number of programs in Japan and Thailand are also due to number of regular type of training courses conducted by Asian Disaster Preparedness Centre (ADPC) and Asian Disaster Reduction Centre (ADRC) respectively. It is interesting to note that the highest number of programs could be in Thailand if all of the courses (regional and other training courses etc.) conducted by Asian Disaster Preparedness Centre (ADPC) are included in total identified cases. However, it was not possible to find web pages covering all of such courses. To elaborate more on it, "15th

Regional Training Course on Community Based Disaster Risk Management" (Jan 22 - Feb 2, 2007) identified can be understood that this course has occurred for 15th times till Feb 2, 2007. However, this study identified this course as one case instead of 15 courses because of the availability of the particular web pages. There are 6 such courses conducted by Asian Disaster Preparedness Centre (ADPC) and others in the total 187 cases identified.

Similar types of courses are conducted by Asian Disaster Reduction Centre (ADRC) in Japan and all of such courses (7 programs) are identified in this study. Unlike ADPC case, WebPages on all of these courses were available in the internet.

If all of such courses were to be considered then the total number of case study would increased by 75 more cases (i.e. 262 instead of 187 case studies).

② Types of Programs/Projects

The identified programs were also further analysed on whether each of the disaster education program are independent or part of the program. Trainings conducted by Asian Disaster Preparedness Centre (ADPC) like "Community Based Disaster Risk Management" or JICA/ADRC's "Seminar on Disaster Management" which solely are trainings fall on this category. This category also includes all other programs which are developed to provide disaster education only. The other category includes "ASEAN Regional Program on Disas-

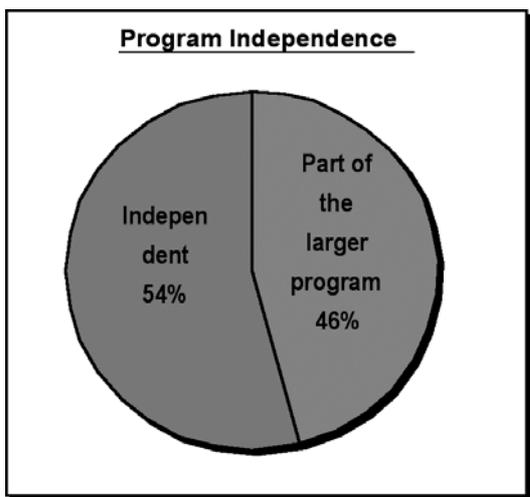


Figure 2 Program Independence

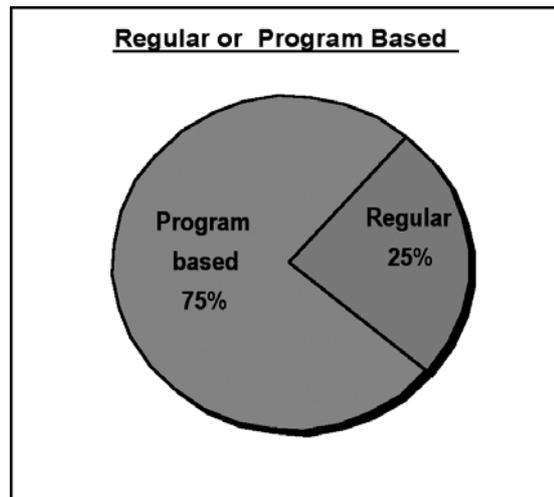


Figure 3 Regular or Program Based

ter Management" which has disaster education component as the part of the larger program.

To elaborate further, more than half of programs/projects (54%) are independent in nature i.e. more than half of the programs are solely developed for providing disaster education only and slightly less (46%) have disaster education activities along with other activities.

It was also found that 25% of the identified programs/projects are regular in nature while other programs/projects are based on the life or existence of programs/projects. For example regular trainings con-

ducted by training institutions, Red Cross Societies and some NGOs. Examples again include ADPC "Community Based Disaster Risk Management" which is conducted on regular fashion, JICA/ADRC's "Seminar on Disaster Management" which is conducted every year, or Friday Free Clinic of National Society for Earthquake Technology described more later in this report.

③ Time of Start of the Program

The starting year of all the programs/projects were observed among the identified. Programs/projects were

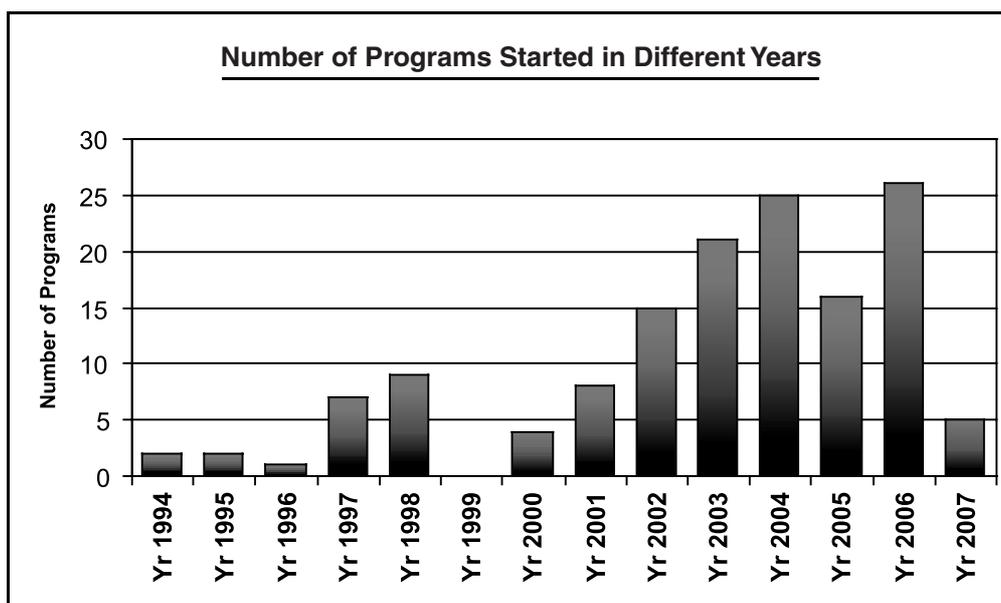


Figure 4 Number of Programs Started in Different Years

found to start from 1994. However, this does not conclude the absence of disaster education programs/projects before 1994. Figure 4 below shows that most of the programs/projects started in the year 2002 to 2006. It was found that, 26 programs/projects (highest number) started in the year 2006 followed by 25 programs in 2004, 21 programs/projects in 2003, and 15 programs/projects in the year 2002.

④ Implementing Group

Various implementing groups were observed. It showed International and National Governmental Organisations (NGO/INGO) including Red Cross and Red Crescent Societies have implemented the most programs/projects followed by technical institutes. Technical Institutes include technical centres such as Asian Disaster Preparedness Centre (ADPC), Asian Disaster Reduction Centre (ADRC), and various other technical centres and training institutions. Government includes national and international government agencies, departments etc. UN agencies include agencies under United Nations.

Total of 189 case studies collected were further analysed on the basis of hazard covered, target group, objectives of the training, methods of education, duration, and funding agencies. The details of all 189 cases including one case with countries from South Pacific Region are given in the table.

⑤ Target Groups

Analysis on the target groups for disaster education

showed about 110 programs/projects are targeted straight to the communities. Governments are the second highest target with 93 projects/programs followed by UN, NGO and INGO, 43 programs/projects, School community (schoolchildren and teachers), 40 programs/projects, and technicians (masons, engineers etc.) 34 programs/projects. Almost all of the programs have many targets groups however, all the projects/programs ultimately benefits communities. All these programs/projects are targeted alone or with other groups.

5) HAZARDS COVERED

Hazards covered by the identified program were analyzed. About 70 % of the program considered multiple hazards (two or more hazards). In other word, most of the programs/projects had disaster education components (like trainings, lectures, drills etc.) with the focus on multiple hazards. Furthermore, the multi hazard cases usually cover those hazards that are specific to the country or region. For example, China's single "Disaster Management Programme" of UNDP covers hazards like floods, droughts, earthquakes, blizzards and typhoons. Multi hazard category also include those program that focuses on general disaster risk management such as regular types of training "JICA-ADRC seminar on Disaster Management" of Japan. Furthermore, this category includes any general disaster risk management trainings, workshops, exhibitions, etc.

As compared to multi hazard coverage, very less programs/projects are found to consider specific hazards. Specific hazards include Earthquake, Floods, Tsunami,

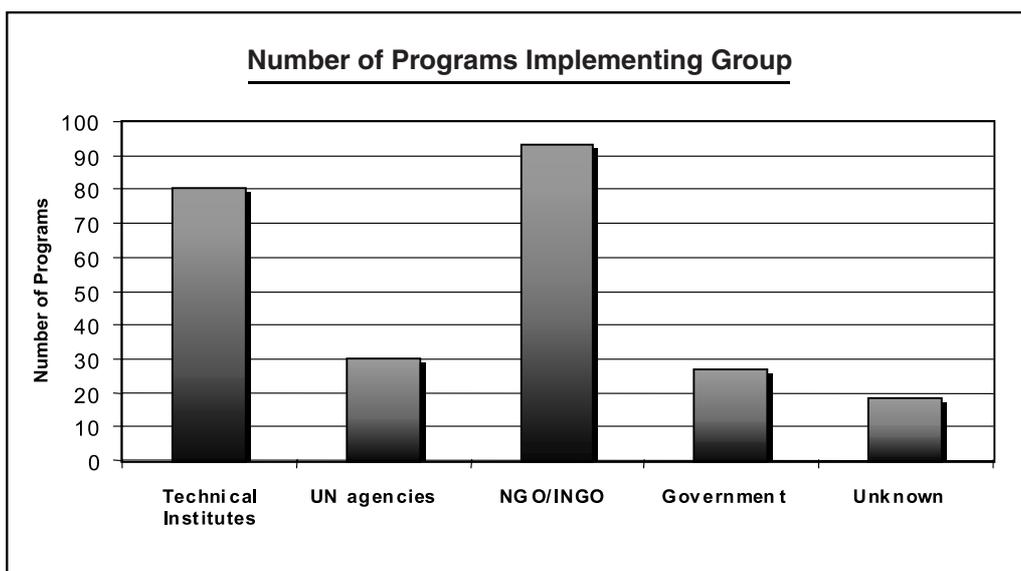


Figure 5 Program Implementing Group

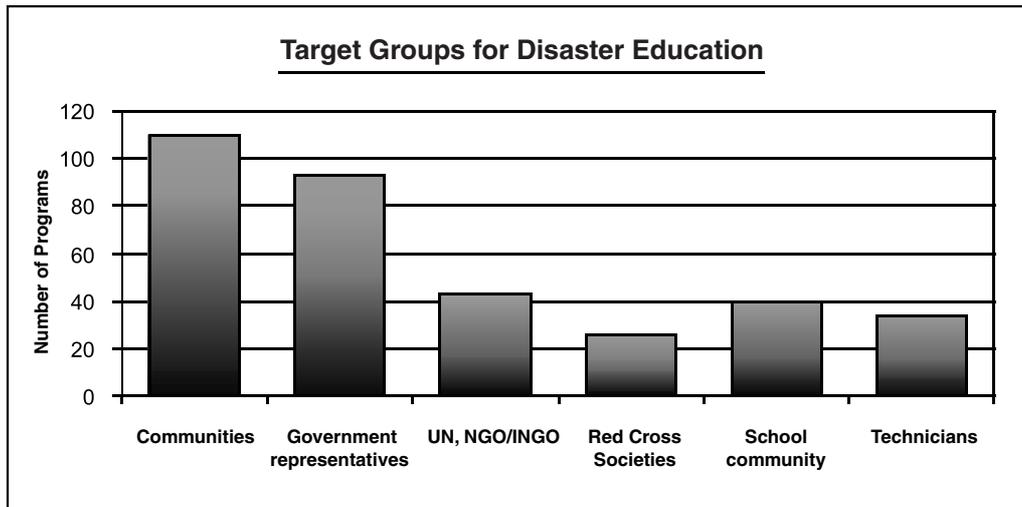


Figure 6 Target Groups for Disaster Education

Drought, Typhoons/Cyclones, Landslides and Fire. Respective coverage is shown in the Figure 6 below. There are very less (11% or below) programs/projects that considers these specific hazards only. For example, a regional program "Reducing Vulnerability of School Children to Earthquakes" focuses on Earthquake.

Among single hazard, Earthquakes (11%) followed by Flood (9%), Tsunami (5%) are found to be covered by most of the programs/projects.

It was also noted that many program/projects have emerged after particular disasters. One program of this type is American Red Cross Society's "Tsunami Recovery Program - Disaster Management" emerged after the Indian Ocean Tsunami of 2004.

6) AGENCIES FUNDING COMMUNITY EDUCATION

Among the various funding agencies in the region, most of the non-formal disaster education programs identified were funded by USAID/OFDA (33 programs), followed by UNDP (25 programs), JICA (16 programs), ECHO/DIPECHO (15 programs), and Canada fund/CIDA (8 programs). There were 23 programs whose source of funding was not known and 23 programs where participants pay themselves for the

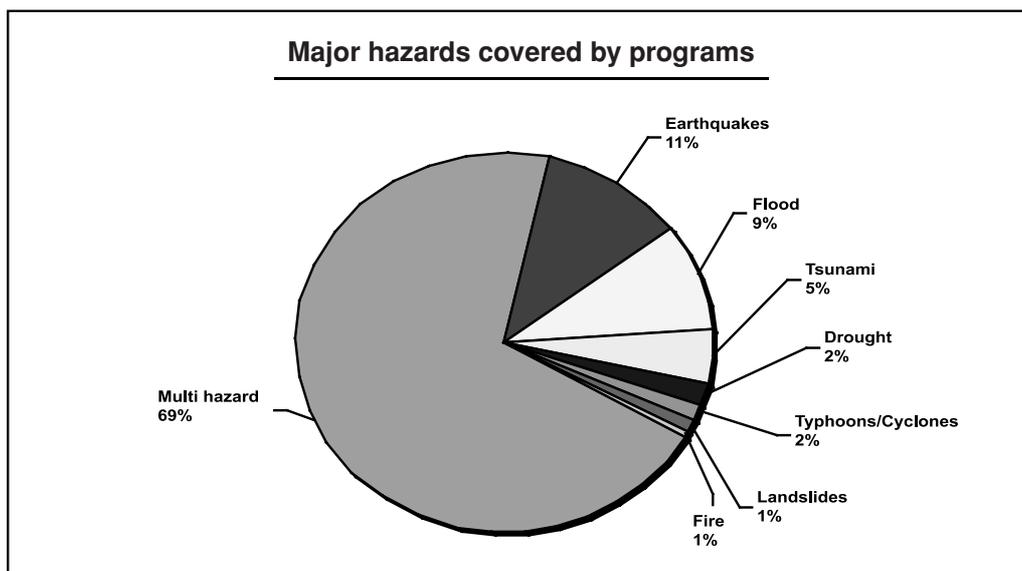


Figure 7 Major Hazards Covered by the Programs

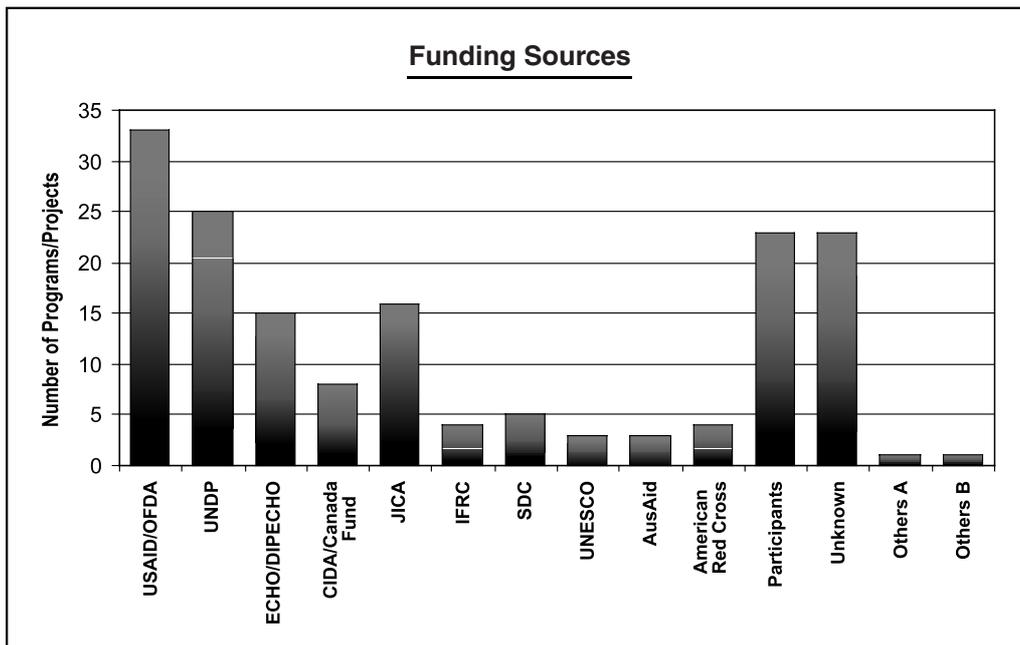


Figure 8 Agencies Funding Community Education

Others A: Includes two programs each by UNCRD, UNISDR, UNICEF, World Bank, GTZ, CARE, DFID, OCHA Kobe, and Norwegian Government.

Others B: Includes one program each by UNDESA, UNESCAP, UNEP, WFP, Oxfam, UNHABITAT, Japanese Red Cross, Myanmar Red Cross, Vietnam Red Cross, Cambodian Red Cross, Netherland Government, French Government, New Zealand Government, Bangladesh Government, Indian Government

CARE-Cooperative for Assistance and Relief Everywhere, DFID-Department for International Development, OCHA-Office for the Coordination of Humanitarian Affairs, UNCRD-United Nations Centre for Regional Development, UNDESA-United Nations Division for Sustainable Development, UNEP-United Nations Environment Programme, UNICEF-United Nations Children's Fund, UNISDR-United Nations International Strategy for Disaster Reduction, UNESCAP-United Nations Economic and Social Commission for Asia and the Pacific, OCHA-Office for the Coordination of Humanitarian Affairs, GTZ-German Technical Cooperation, WFP-World Food Programme

education. It mostly includes training program conducted by Asian Disaster Preparedness Centre (ADPC) and Red Cross Societies in respective countries.

7) METHODS OF EDUCATION

Various methods of non-formal education were observed among the identified cases. As none of the programs/projects had exact program as "non-formal education", this study tried to consider all the possible means of non-formal education that were provided by the identified projects/programs. To simplify different categories of non-formal education all the identified programs/projects were categorized into 10 broad categories as shown in Figure 9.

① **Training**

Training category includes any forms of training activities such as class room based, lectures, field exercises, on-the-job etc. mentioned in the programs. It includes trainings given by Red Cross Societies, Asian Disaster Preparedness Centre (ADPC), Asian Disaster Reduction Centre (ADRC) and other training centres to special training activities in the specific programs. Among the various methods of disaster education, training was the most used method (129 out of 189 cases) for non-formal education among the identified programs/projects.

② **Awareness Raising Activities**

Awareness raising activities was the second highest

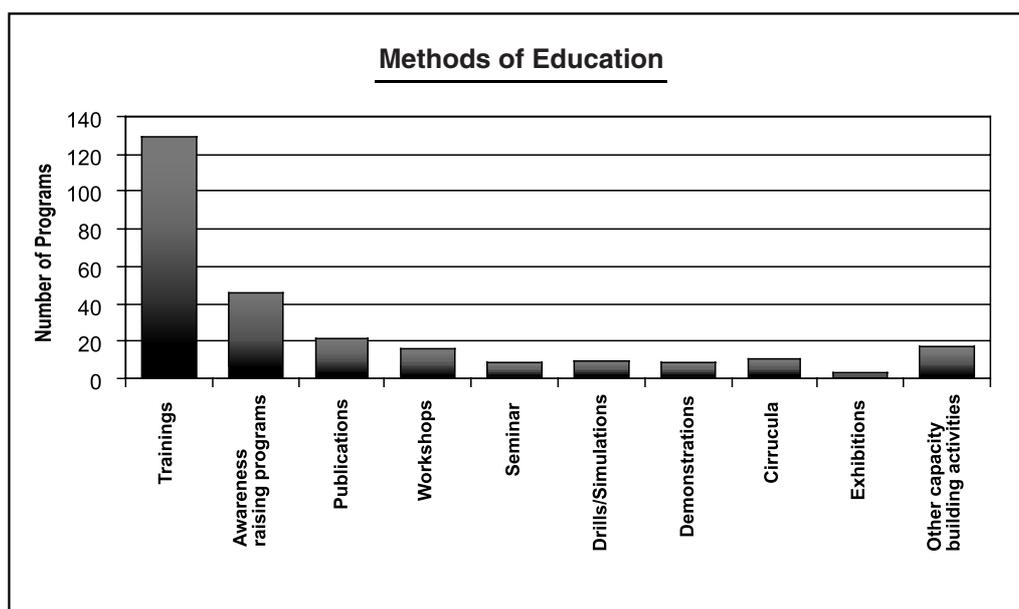


Figure 9 Methods of Education

observed methods found among the identified programs. This category includes all the programs/projects that had any awareness raising components in their objectives or activities. It includes public awareness programs/activities/campaigns, community empowerment, education campaigns, public information campaigns and information exchange. Though publications, demonstrations, drills, simulations and exhibitions are awareness activities, to make more detail, they are separated from this broad awareness raising category. Awareness raising activities is covered by 46 programs and ranks second highest means of non-formal education among the identified programs/projects.

③ Publications

Publications category include any publications related to disaster education such as related newsletters, publications, pamphlets, posters, booklets, films, books, guidelines and education materials related to disaster training materials etc. It covered 21 of the total 189 identified programs/projects. Two significant publications identified were "Natural Disaster Preparedness and Education for Sustainable Development", UNESCO, 2007 and Tsunami awareness booklet "Inamura-no-hi", ADRC & ADRRN, 2005.

④ Workshops and Seminar

Workshops and seminar related to disasters are covered by 18 and 9 programs respectively. Though these activities are covered by only 27 programs, they, in fact have the potential to be the highest in number for

methods in disaster education. There is high chance that all of these activities are not available in the websites.

⑤ Demonstrations, Drills, Simulations, and Exhibitions

Demonstrations, drills and simulations, and exhibitions category in this study include all the programs / projects that have been mentioned as it is in the respective programs. They are found in 9, 10 and 3 programs respectively.

⑥ Curricula

Curricula include all the programs/projects that have mentioned curricula in their respective programs/projects. It mainly refers to the development of disaster education curricula in the schools. This category was identified in 11 programs.

⑦ Other Capacity Building Activities

Finally, other capacity building category includes programs/projects which directly or indirectly provide non-formal education. This includes skill development activities, development of disaster management plans, disaster management committees, group formation for disaster management, study tours, participatory learning approaches, technology transfer and other capacity building activities. They are available in 17 programs / projects.

8) DIFFICULTIES IN COLLECTING INFORMATION

Followings were the main four difficulties in collecting information from internet:

① The data were not posted in the internet website

Although many programs were implemented, information about those programs was not posted in the websites. Many program or the institutions who implemented the programs did not have website. Thus collecting data was very difficult.

② The posted data were mostly incomplete

The posted data in the internet did not give all the required information needed for a better collection of data. The data posted were either incomplete, or were already removed from the website.

③ Information not specific

The websites that contained information about disaster community education were not well structured (as there is no specific format to post the information at the internet). Most of the information available in the websites was so broad that it made the research time consuming especially to abstract the required information.

④ Websites not in English

Some of the websites retrieved were not in English. Some of the documents were also not in English.

9) CONCLUSIONS

An internet based research on non-formal disaster education to common people was carried out as per the agreement between GRIPS and NSET. This research study identified and analysed 150 case studies from 35 countries in Asia and Pacific regions.

All the data were searched/listed/analysed on the basis of geographical coverage, program/project name, hazard type, target group, objectives of the training, methods of education, duration, funding agency, evaluation system and implementation agency. The partner organizations, other characteristics and remarks and the corresponding website were also listed in different columns.

A total of 189 programs/projects were covered to come up with several conclusions. The study identifies case studies from 31 countries in Asia and including 1 case from 11 countries in South Pacific regions.

None of the programs/projects identified had exact program as "non-formal education", hence, this study tried to consider all the possible means of non-formal education that are provided by the identified projects/programs.

The downloaded WebPages were analyzed in terms of geographical coverage, number, nature and time of the programs/projects, implementing group, hazard coverage, funding agencies and methods of education are included in the Appendix of this report.

The total number of non-formal disaster education programs could definitely be more in number than mentioned in this report. It was observed that all the available programs/projects are not always available in the internet. Many training, workshops are not available in the web sites even after its implementation and details are not available on the web. Any program or initiative that did not mention the details would not have added value to this study and hence was not listed because no analysis could be done. However, this research gives the general idea on non-formal disaster education based on the information available in the internet.

Part II: Case Study of Disaster Education in Nepal for Common People

In developing countries, the lack of awareness among people towards earthquake hazard and the level of risk attributed to their living practice is the reason why they put no or the least priority for the safety against the disaster. We have experience from recent earthquakes that the prime victims of such events are those who are least prepared. Moreover, lacks of knowledge of simple measures that are well within the common people's capacity to understand and implement towards the risk reduction lead the traditional fatalistic approach. The formal sector which decides the policy develops the program and, in most cases, implements projects also lacks to realize the importance of incorporating mitigation measure into development process and of planning for the response during the earthquake disaster.

In Nepal, efforts are made for earthquake awareness to address these issues with a multi-front approach through a number of programs. Incorporating awareness component in activities of hazard identification and risk assessment, planning and mitigation measures is a major aspect of the awareness campaigning besides visible awareness programs by means of rally, public gathering poster, pamphlet, etc. The target groups of the awareness activities are all who are not aware of the risk, who thinks that the mitigation is not viable solution and government officers who are responsible for planning and execution of development project and operation of infrastructures.

Since last ten years when Kathmandu Valley Earthquake Risk Management Project (KVERMP) had been

carried out by National Society for Earthquake Technology (NSET) in association with GeoHazards International (GHI), public and government awareness in earthquake has been increased by the project itself and by the follow-up projects in risk management in Nepal. As a result of increased awareness, several initiatives towards mitigation and preparedness are taken by local government bodies, national and international institutions, and media agencies. A visible demand is created to from community people for trained masons to build their house earthquake resistant. Municipalities incorporate Nepal National Building Code into their building permit process to integrate seismic resistance into the process of new construction in urban areas.

The organization NSET is focused on Earthquake Risk Management (ERM), and it deeply believes that earthquake protection of greater mass of people even in developing countries in the seismic belts can be achieved by enhancing earthquake awareness of the communities, helping them to understand the seismic risk and advising simple solutions in non-technical language so that it can be easily internalized by local communities. NSET understands the cost effective and simple solutions are better than high tech solutions that might work better, but are outside the reach of the common people of Nepal and the region. To accomplish its vision, NSET is working with local communities to educate them on earthquake risk and helping them to mitigate this risk through community level programs such as earthquake awareness, school earthquake safety program, and community based emergency preparedness program, etc. These initiatives combine with policy advocacy and provision of assistance to academic institutions for institutionalization of capacities for disaster risk management. Such combination of top-down and bottom-up approaches employed in a mix of formal and informal processes of education has resulted in ample opportunities for colearning and confidence-building and design and implementation of successful methodologies of earthquake risk reduction that have not only been able to bring complex concepts of earthquake risk management to the "last mile" but also have demonstrated social, economic, cultural as well as technical feasibilities of earthquake vulnerability reduction even in a weak economy country like Nepal.

1) REAL REDUCTION OF EARTHQUAKE RISK: EDUCATING THE COMMON PEOPLE

Raising earthquake awareness is a major component for bridging the knowledge gap. By awareness raising myths and fallacies can be eradicated, fatalism can be reduced and community can be convinced of impending seismic risk and way out to mitigate it. NSET has

developed innovative ideas to aware people from all walks of life - policy and decision makers, politicians, media, international agencies etc. Of course, the objectives of awareness raising are different for the different target groups: for politicians and high officials, it is to convince them of the necessity to look at disaster risk reduction as a development issue, for the general public it is enabling them to understand the risk and to identify possible measures that could reduce the vulnerability on an incremental basis. Some of these activities are discussed in this section.

2) EARTHQUAKE SCENARIO

An earthquake scenario due to any real earthquake in human memory which can be somehow related with them can be an effective tool for awareness raising. However it must be spoken in common man's language and he should be able to link himself with the story. Factual figures and qualitative presentation is more important in such scenario. Seeing effectiveness of an earthquake scenario, and to help people understand impending earthquake risk in Kathmandu Valley, NSET developed an earthquake scenario under Kathmandu Valley Earthquake Risk Management Project (KVERMP) during 1997-2000, in association with Geo Hazards International (GHI) and the Asian Disaster Preparedness Center (ADPC). The scenario was successful in explaining the personal and communal losses and suffering in form of a storey if 1934 Great Nepal-Bihar Earthquake would repeat. The scenario was published and widely distributed. The document includes a description of possible damages to various vital systems in Kathmandu, and an explanation of the repercussions of this damage on life in Kathmandu Valley.

3) EARTHQUAKE SAFETY DAY

At NSET's request, Government of Nepal declared January 15 (or 16) as the Earthquake Safety Day of Nepal, and established an Earthquake Safety Day National (ESD) Committee for observing the Day annually throughout Nepal. ESD National Committee draws representatives from all emergency response organizations and critical facilities management. The Hon. Minister of Home Affairs chairs it. Establishment of ESD National Committee has provided the basis of sustainability of the earthquake risk management program in the country. ESD is the culmination of earthquake risk management works implemented in the country in the preceding 12 months, and allows taking stock of the achievements and shortcomings.

The National Society for Earthquake Technology - Nepal (NSET-Nepal) observes the Day by organizing activities with the purpose of raising awareness on

earthquake risk reduction and preparedness. The program is organized in cooperation with government and non-government agencies. The Earthquake Safety Day program of NSET became a part of the national program.

NSET has successfully organized 9 earthquake safety days in the past since January 1999 to January 2007 with an encouraging participation by individuals and institutions from Nepal, India, Pakistan, Thailand, Indonesia, Japan, and USA. The ESD program typically runs for 4-5 days, and it includes ceremonial parts (national meetings with Honorable Prime Minister as the chief guest, march along the streets, publications of posters and other awareness materials), a symposium on experiences of earthquake risk management, an earthquake awareness exhibition that runs for 4-5 days, various programs for school children, demonstration of shake table test of 1:10 scale building models with and without earthquake-resistant elements.

Objectives

To raise awareness on earthquake risk reduction and preparedness

Activities

Symposium, Awareness speech by the Minister, ESD Rally, High Level Meeting, Annual press conference.
Earthquake Safety Exhibition with

- Shake table demonstration
- Real scale model of earthquake-resistant construction
- Exhibition of historical photographs of past earthquakes
- Exhibition of disaster management related works, methods and products by various organizations (national/international)
- Children essay/paintings competition, street drama



Figure 10 Women participating at Earthquake Safety Day Rally at Lalitpur Sub-Metropolitan City

on earthquake safety

Distribution of numerous publications such as information leaflets, calendars, earthquake resistant construction posters to the public

Public talks about Kathmandu Valley's Earthquake Risk Radio/TV Programs

Program Output

A wide international and national participation of professionals and institutions in the ESD program

Increased number of well informed and aware communities

4) SHAKE TABLE DEMONSTRATION

The Shake Table Demonstrations that NSET uses is an innovative idea of bringing research equipment out from the laboratories to vulnerable communities, and improve the technology by adapting it to the local situation. Shaking table demonstration is strong tool for awareness raising, translating technical knowledge in a language that is understandable to common mass, education of craftsman, convincing people, and trust building for the earthquake resistant construction. The tool is able to convince community and craftsman both for need of earthquake resistant construction and its effectiveness. The philosophy behind the demonstration is "seeing is believing".

This is the technology that demonstrates all the engineering concepts of earthquake-resistant elements of building construction in a simple way, and convinces the audience of the feasibility of earthquake preparedness. The Shake-Table designed by NSET is an award-winning model for technology transfer and to spread awareness on the effectiveness of earthquake-resistant construction. The demonstration model has also won the San Jose Tech Museum Award under Microsoft



Figure 11 People observing Earthquake Safety Day

Education Award Category in 2004.

This low-tech innovation has been highly effective in educating people about the structural shifts in buildings during earthquakes and for raising awareness about safe building construction. The Shake-Table is essentially a building built to a given scale and mounted on a table which is put through certain force to see the effects of similar jolts that buildings go through during an earthquake. NSET demonstrated its first Shake-table in January 1999. It has so far been demonstrated in many countries of the Asia-Pacific region including Afghanistan, India, Indonesia, Iran, Pakistan, and Tajikistan. NSET has also assisted many partner institutions to design their own Shake-Tables to spread awareness on safe building construction. NSET also supported UNCRD in the organization of special sessions on Shake-Table demonstration at the World Conference in Disaster Reduction (WCDR), Kobe, Japan in January 2005.

Objectives

- To convince people about earthquake resistant construction
- To demonstrate how risk-reduction techniques in construction can help buildings withstand the forces during an earthquake
- To convince the people on the simplicity of integrating earthquake-resistance elements into the buildings

The Demonstration Model

The Shake-table essentially has two identical buildings of the same shape and size scaled to 1:10 of the actual sizes. One of the buildings is built using earthquake resistant techniques and the other is done traditionally - or without taking any special measures. Both the buildings are placed on the same shaking platform (table) and thus exposed to forces similar to that the buildings have to induce during earthquakes. Increased load is applied to the table through which the force is transferred to the scaled models, and the weaker one made without earthquake-resistant elements progressively collapses. The tables are used to demonstrate how risk-reduction techniques in construction can help buildings withstand the forces during an earthquake and convince them of the simplicity of integrating earthquake-resistance into the buildings. NSET has conducted more than 25 such demonstrations in Nepal. An A3 size (300 × 420mm) shake-table has also been developed for use with small-scale models for demonstrations at schools.

Program Output

The shake table has always been a big crowd-puller. It could be used effectively to impart earthquake education to a wide cross section of the population, even to

the illiterate masses. This is the technology that demonstrates all the engineering concepts of earthquake-resistant elements of building construction in a simple way, and convinces the audience of the feasibility of earthquake preparedness and provides solutions to the problems of earthquake safety.

The technology is worthy of recognition not only because it is a successful adaptation of a sophisticated research equipment for the use by common people, but also because of its simplicity in construction, its flexibility of use even in remote areas, its acceptability in all region with diverse cultural, linguistic, and building construction traditions.

5) RADIO/TV PROGRAMS

To get to the doorsteps of the people, several local radio and TV stations are airing earthquake safety and preparedness messages on a regular basis. NSET has established collaboration with local FM Radios for mass education on earthquake safety. The program targets the homeowners and convinces them on the possibility and affordability of making their homes earthquake-resistant, and making their family safe by learning about earthquake preparedness. NSET provides expert knowledge to the programs by deliberating on aspects of earthquake risk and its mitigation.

NSET and Sagarmatha, the local non-profit and highly respected FM Radio Channel collaborated to air weekly half-hour programs on Earthquake Safety. The program is successful and continued till date. Outside the Kathmandu valley, Annapurna FM in Pokhara city launched a weekly program on earthquake safety with the help of NSET. The objectives of the radio program other than disseminating information, is to influence public opinion on what needs to be done about disaster management in Nepal. The message that should be conveyed in each and every episode is "BE PREPARED".

Radio program on earthquake safety was started for various purposes as;

- For disaster risk reduction the program plays a major role to bring changes in the policy level, develop technology and increase public awareness
- To bring into public knowledge the views of the policy makers and developers for disaster management
- To create pressure on the policymakers for the development of well-planned, safer cities
- Facilitate a discussion forum for the general people and the decision makers on issues that not only cover the national but also international disaster events
- Bring into public knowledge the ongoing studies and researches on disaster

- To provide information to the school children on earthquake preparedness
- Change the existing perception towards development

The half-hour program covers news, tips on earthquake safety and various interviews and discussions. As the name "Bhukampiya Surakchaya" suggests Earthquake Safety, the main focus of the program is earthquake but other disasters are given equal space, e.g. tsunami, floods, landslides etc. The program is basically focused on Prevention and Preparedness rather than describing the Physics. And it basically covers the efforts and experiences of NSET towards risk management both at the national and international level and the outcomes of the community based disaster risk reduction and disaster management programs.

Program Impact

After the Initiation of Earthquake Safety Radio Program:

- Not new and no more scary subject
- But in fact interesting subject
- More curious audience
- More familiar with earthquakes and its preparedness.
- Discussion Forum for development and Disaster.

6) EARTHQUAKE CLINICS

Earthquake Clinics are one of the innovative initiatives of NSET for the transfer of technology and also for educating the common people. The aim of the clinic is to improve seismic performance of non-engineered buildings being constructed by the untrained masons. NSET conducts earthquake clinics (mobile and in-house both) on regular basis. For in-house clinics NSET encourages potential house owners and existing house owners to come to NSET office with drawings to discuss earthquake strengthening of their abode. They are encouraged to come with their petty contractor. In mobile clinic, NSET professionals visit the construction site and discuss with the house owner and the craftsman about deficiencies in their construction, and advice them how these can be mitigated. NSET provides these advices free of cost and the clinics have become very popular.

Objective

- To bring knowledge of safer building construction in construction site of informal buildings.
- Assist Building Code Implementation at Site Level
- Monitor Impact of Earthquake Awareness
- To stimulate the house owners, builders to consider earthquake risk.

Scope

① Assist Building Code Implementation at Site Level

A. Define Target Project Area/Group/

The target area will be selected depending upon following criteria:

- Consultation with the Municipality 6/Ward
- No of buildings being constructed
- Interest of that particular community
- Rolling effect of information/Replication

B. Site Selection

Sites will be selected based on following criteria.

- High visibility
- Radial effect to other buildings
- (Only Residential Building) 2/3 storied buildings
- Consensus basis

C. Safety Level-Incremental Safety

The level of safety after the intervention through the mobile clinic will be Incremental Safety. It will be clearly stated in the written document and oral presentation in order to avoid the illusion, confusion and overall 100% safety as regards to earthquake safety of the home owner.

D. No Design-Detailing/Quality Control

Intervention will be as well at the basic principle of earthquake resistant construction. The approach of the team will not to explain the high-tech engineered theories, designing principles, detailing and quality control. The team will focus on basic things, which will help in earthquake safety level of that particular building with minimum cost implications.

E. Follow up - either Client or NSET or Both

Follow up mechanism will be developed based on the discussion with the client and the municipality.

② Monitor Impact of Earthquake Awareness

While visiting the site, this opportunity could be used to study the impact of earthquake awareness at the community level. The tools will be used through the visual study and collection of questionnaire. The result of this impact study will help to redefine earthquake risk reduction strategy and implement new initiatives.

③ Partnership Building & Earthquake Awareness

This type of initiatives would be successful through partnership building and sharing of experiences. So following activities could be organized:

A. Invite & involve partners during clinic

During the Mobile Clinic session, NSET partners would be invited to observe and involve in implementation process. Such partners could be: Department of Urban Development and Building

Construction (DUDBC), Municipalities, Ministry of Local Development, Professional Societies etc.

B. Seminar for Sharing Experiences

After completion of no of clinics, a seminar will be organized for sharing of experiences, where the partners, professionals, clients will share the experiences and help us to give new direction.

Activities

The activities are being carried out in close cooperation with the concerned authorities and local government

Flow of activities in the field

- Select an area
- Select a house under construction
- Introduce and explain our mission
- If home owner agrees - brief description on Earthquake Risk of Kathmandu
- Survey the house and identify the deficiency
- If the house owner shows more interest - prescribe the measures to mitigate
- Aware the house owner/ craftsman about the deficiencies that could cripple into during further construction. Also aware the implications and possible mitigation
- Ask if there is any confusion
- Distribute the publication and ask to visit NSET if he/she has more questions
- Say thank you and good bye and move to new house

Preparation

Prior to start this clinic, team should be prepared and equipped with following:

1. Check list

A standard checklist format related with the building construction will be carried by the team. The checklist will help the team to do quick and dirty



Figure 12 Consultation with house owners during Friday Free Clinic at NSET office

assessment of the buildings, which will help team to define prescription to particular building.

2. Visual Aids

A set of visual aids will be essential for the team to explain the recommendation clearly. It will be also helpful to save time of the team.

3. Process Standardization

4. Training

Orientation program should be organized for the team prior to commencement of the Mobile Clinic. Few pilot mobile clinics would be organized to develop necessary strategy during the field visit of Mobile Clinic.

5. Publications

The team should carry publication materials related to earthquake safety should provide at nominal costs to the client. The amount from these publications could be used to reprint same publications, which could be used in future.

6. Resource Required

Following resources are required to conduct this clinic

- Human Resource: Engineer/Trained Mason
- Equipments: GPS/ Camera
- Transportation: Vehicle
- Logistics: Visual Aids/Models

Outcome

- The clinic served as Onsite Implementation of Building Code
- Remarkable improvements in building construction were observed as follows;
 - Stirrups shape, size and spacing
 - Size of structural members like column
 - Improved detailing in connections (beam column joints), protection of infill walls etc.
 - Most of house owners got to know about the



Figure 13 Shake Table demonstration to public during Earthquake Safety Day

earthquake Risk in Kathmandu Valley.

- Most of the house owners were convinced on the benefits of seismic resistant construction and its economy
- Knowledge of safer building construction was disseminated in an effective manner

Lessons learnt

Trainings for Masons, Overseers and Engineers needs to be continued

'Mobile Earthquake Clinic' needs to be a regular program not only for the safety of new building construction but also to make significant progress in overall earthquake risk management.

④ House owners Consultation Program (Friday Free Clinic)

In developing countries, it is ultimately the house-owner who should be convinced on the benefits of reduced earthquake risk. Personalizing the risk as well as the risk reduction actions can do this. So keeping this in mind NSET started providing consultations to the potential house owners on Friday afternoons who are planning to construct a new house in Kathmandu Valley.

This weekly consultation program is free of cost and focuses on how to construct earthquake resistant buildings and usually the house owners come with their masons, contractors or the technicians to learn about the technology. The program is in fact direct implementation of building code.

The program includes - General Orientation on Earthquake Safety Measures in order to;

- make understand and accept the importance of the safety of the building in which the owner is investing
- make prepared to pay or spend a little extra for the safety
- suggest to hire qualified or experienced designers and skilled tradesmen

6) GRASS-ROOTS LEVEL TRAINING PROGRAMS

Local craftsmen are the best messengers to carry earthquake resistant technology to community because of their accessibility and communities' trust on them. For it they need to be convinced of affordability of mitigation intervention. The masons help to get the buy-in from the community - they convince the communities to accept the technology, concepts, construction process and additional costs for this.

Too often earthquake safety public education program fails even before it starts. The problem is: too much attention is paid on content of the education message and not enough on the nature of the audience (Stalling 1986). Same problem has been often observed

in craftsman training. It is because these craftsmen come from different learning process: learning by listening and learning by doing. However, the trainings imparted to them were very formal class room training. The training covered more theoretical aspects of construction rather than practical aspects which failed to draw their attention. In this regime NSET has taken a different approach for craftsmen training. NSET has developed interactive class room trainings, which is supplemented by on-the-site trainings, sub-assembly tests etc to help them understand where they are making mistakes and how these can be mitigated, how they can improve their quality.

To cover other stake holders of construction industry, apart from the craftsmen, NSET is conducting technical trainings for contractors, technicians, engineers and even for school teachers in collaboration with government and non-government organizations. Course for such training programs have already been developed and a few are published. Further, there are several training programs conducted by NSET and others on aspects of individual and collective safety from earthquakes before, during, and after an earthquake.

7) MASON TRAINING

Masons are the key actors who translate designs into reality, especially in developing countries where more than 90% of the buildings are non-engineered, and the masons are commonly serving as the "best technical hand" available for building construction. Therefore, masons need to be aware of the technology they are working with in order to ensure optimum, efficient and effective use of the building materials and the construction processes. NSET began training masons several years ago with the objective of making them aware of the techniques used for risk-reduction with a full understanding of "why" and "how". At present, the mason training program of NSET, which combines class-room training with hands-on filed exercises, has become very popular in Nepal and abroad. NSET organized such training programs also in different countries including Afghanistan, India, Iran, Indonesia, Pakistan, Japan and Tajikistan.

The whole execution of project is designed as a tool of developing skilled manpower in earthquake resistant construction in local level. In all the process of seismic retrofitting and reconstruction, engineers of NSET work with masons showing them the details and explaining the complete procedures. Focus is placed in explaining the meaning of the processes such as curing of concrete, proper reinforcement details, what the earthquake-resistant elements do, how the retrofit elements such as splints, bands, corner pins, etc function

to withstand the earthquake force.

Besides the training in the form of explaining-as-you-go, separate training classes are organized in evenings. The main target groups are the craftsmen of the respective village, but the classes are typically open to all interested. The technical knowledge of earthquake-resistant construction is given to them systematically. So far participation of villagers and craftsmen was always higher than the number of masons directly involved in the construction process in the village. This was due to the raised level of awareness on earthquakes. They have seen their future in this 'modern' technology that they should be equipped with. They have so far been very enthusiastic.

Obviously, the common people, during the training session, show high concerns over the matters that how their own houses are built and the weaknesses of the prevailing construction practices. Masons pay much attention to know about the positive and negative aspects of their conventional practices, the need to adopt new methods, extent of change required possible solutions to problems that the change may bring about and its harmony with seismic retrofitting and reconstruction of school. It is noteworthy that once trainees could be convinced and equipped with seismic-resistant techniques, they also demanded that the methodology to be communicated to other villagers (Karna et al).

The training courses follow hierarchical procedure starting from problem identification to solve the problems using examples, exercises etc. Several tests are conducted to support the knowledge in relation to effect of placement of reinforcement rod in beam/slab, quality of work governed by material and workmanship like excess water effect, curing effect etc.

It has always been encouraging that the local masons understood the language of retrofit, earthquake-resistance design and the importance of quality control. They could remember the advice of their great grandfathers regarding earthquake resistant design. So far 55 masons from the ten school communities have been trained in the skills of seismic retrofitting, earthquake-resistant construction and quality control. Based on the experiences gained from the mason training, a curriculum/guideline for Mason Training has been prepared.

Introduction

The first step to improve the construction quality and safety level of buildings is to prepare trained manpower required for earthquake resistant construction technology. A few institutions and individuals have initiated to organize training programs to produce skilled buildings workers, though in a very small number. The graduates of such training are mainly engaged in the supervisory role. To improve the construction quality the trained

masons have to work as masons and it is not possible until more skilled/trained masons are produced. Such training programs need to be widened and regularized.

Rationale

Construction of residential buildings in a developing country like Nepal is primarily carried out by the informal sector, mostly the owner/builders. The work-force (masons, bar benders, electricians and plumbers) employed in this sector does not have any formal training. Most of them acquire skill either through trial and error (working as a helper to the so called "skilled ones") or through practical experience by hereditary transformation.

This system may have been good enough in the past. New materials and technology are now replacing the old ones in the construction sector of the developing world, which are different from the existing ones and they demand specific skills for their effective use. It is neither possible nor desirable to stop new materials and technology coming to the construction practice. Improper use of such materials and monkey imitation of technology have resulted in high cost, low quality of buildings and, loss of life and property. Further the prevailing construction practice does not incorporate earthquake resistant components and the existing housing stock is highly vulnerable to earthquakes.

Alternative Building Materials and Technology for Nepal, one of the series of reports prepared by National Building Code development Project, states that only less than 5% of the residential buildings are engineered. The owner builders construct more than 95% of the buildings with the assistance of the head masons who plays both the roles of consultant and contractor. Institutions provide maximum resources to train the engineering manpower in training them for the earthquake resistant construction technology that can only facilitate the construction of a mere 5% of the buildings, and nothing is done so far for training those who contribute to the 95% of the buildings. This shows a clear need of producing more trained masons by skill upgrading of the practicing masons as well as the new comers in the construction sector.

Goal and Objectives

The main goal of the program is to train practicing masons with basic knowledge of earthquake resistant building construction technology and equip them with required skills to construct an earthquake resistant building.

Its objectives are:

- Explain the importance and effectiveness of earthquake resistant elements in buildings
- Incorporate earthquake resistant elements in new construction

- Outline available methodologies to incorporate earthquake resistant elements in existing buildings
- Familiarize them with the relevant Building Codes existing to ensure earthquake safe construction

Program

The training courses follow hierarchical procedure starting from problem identification to solve the problems using examples, exercises etc. Several tests are conducted to support the knowledge in relation to effect of placement of reinforcement rod in beam/slab, quality of work governed by material and workmanship like excess water effect, curing effect, etc.

Methodology

Though builders and craftsman fall at the end of the construction industry tree, they are the pivotal in creating an earthquake safe abode. This training is planned to provide them with hands-on training on construction aspects of earthquake resistant construction, quality assurance system. This is a 3 days training course for practicing local builders, craftsman. 30 numbers of participants is the optimum size for this training.

Program output

- Trained manpower required for earthquake resistant construction technology
- A curriculum/guideline for Mason Training has been prepared.

8) COMMUNITY BASED DISASTER RISK MANAGEMENT PROGRAM:

Several communities of Kathmandu Valley have started community based disaster risk management programs in their localities and NSET is providing technical assistance to such communities in implementing earthquake risk management initiatives. Some wards of Kathmandu city have begun the CBDM



Figure 14 Mason learning correct techniques of making a frame during mason training

efforts by forming Ward Level Disaster Management Committees, recruiting community volunteers and providing training and capacity building opportunities for them. Ward No. 34 and Ward 17 of Kathmandu Metropolitan City have put tremendous efforts in making these initiatives sustainable. These CBDM initiatives are also supported by KVEPI and PERS initiatives of NSET and recently launched CBDM project with support from UNDP.

Objectives

- Campaign disaster awareness among community people
- Follow/support government DM plan/policy
- Prepare people to work in disaster situation (professional, trained, volunteers)
- Prepare local hazard and resource map
- Prepare/collect DM related materials and disseminate widely among community people
- Draft DMP, get consent from the concerned institutions and implement
- Seek support from national & international agencies for DMP activities

Activities

Some of the Community-level works done by Ward level Disaster Management Committee are;

- Hazard Assessment: Fire hazard map, Flood Hazard Map, Environmental Hazards Map
- Ward Level Disaster Management Program: Neighbourhood Survey using the San Leandro Methodology, Ward Level Consultative Meeting
- Public Awareness: Awareness Rally, Photo Exhibition, Observe Earthquake Safety Day
- Volunteer Training: Earthquake preparedness, First Aid, Fire Fighting, Simulation Exercise
- Helping others to be prepared - Mass Casualty



Figure 15 Mason consultation during Mobile clinic

management Drill at Hospitals,

- Earthquake Preparedness Exercise at various institutions

Achievements and Lessons learnt

- CBDRM started as Training/Awareness Program but it grew in scope

There were several requests for assistance in organizing ward-level Training in DM, as the program received social and political endorsement. The Clubs formed under CBDRM became the host of the Committee

- Community-based disaster management approach is being accepted
- Awareness raising is most effective if tied with mitigation/preparedness programs
- "What is accepted by the Community "is more important than "What is necessary?"
- Involve everybody and transfer ownership
- Institution Building is a Long-term Task
- There is no alternative to "Transparency"

9) ORIENTATION PROGRAMS FOR EARTHQUAKE SAFETY

Nepal is a highly seismic country and the history is full of earthquake disasters. Huge loss of life and property had occurred in series of earthquakes in the past and it is believed that next big earthquake is around the corner. Studies have shown that there will be heavy loss of life and property in the possible future earthquake in Kathmandu Valley alone. The problem of earthquake destruction can only be reduced through coordinated efforts of mitigation and preparedness. So, in this direction NSET is conducting orientation programs for earthquake safety for Embassies, diplomatic missions, aid agencies, INGOs, NGOs, hospitals, schools, clubs, communities like Rotary Clubs, the Scout Jamborees, trade associations, international agencies working in the Kathmandu Valley and even general masses to aware, enhance knowledge on earthquake safety. Usually this program is conducted by NSET upon request of the agencies or organizations. Giving such talks not only informs the public about the Kathmandu Valley's earthquake risk, but it also gives feedback on the concerns and perceptions of the public, which help tailor our public awareness campaign subsequently.

The Need

Earthquake Safety cannot be achieved in developing countries unless we initiate a bottom-up approach in which house-owner and common people become aware, have basic ideas on earthquake preparedness and are convinced on the need to make their residences safer against earthquake. This can be achieved through a massive awareness raising program which NSET has developed and is implementing successfully

Objectives

The main objective of the program is to generate earthquake awareness among the people and the specific objectives are:

- To make the group aware about the earthquake risk of Nepal.
- To give the group basic know-how of earthquake preparedness i.e. what to do before, during and after an earthquake.
- To equip the group with basic ideas of how and what earthquake preparedness message to convey to the communities they are working with.

The topics covered in the program

Earthquake basics: The goal of this part is to make people aware about the impending earthquake risk in Nepal and the region and clarify myths about earthquake. It covers generation of earthquake, measurement of earthquake, earthquake risk in Nepal and region.

Structural risk mitigation: The goal of this part is to give tips on earthquake safe and unsafe buildings. It covers, what makes a building weak or strong in general, and how to identify these weaknesses.

Non-structural risk mitigation: this part covers how building contents could create a risk and how this risk can be mitigated. It covers different approach for non-structural risk mitigation.

Preparedness: This part covers how to get ready for an earthquake. How to start planning, what should be the approach, where to intervene, what to do before, during and after an earthquake and at the same time it also discusses what not to do. This part also covers earthquake drill depending upon request from organizers.

The presentations vary slightly depending upon target group, and interest of audience. Usually, expatriates are more interested in preparedness whereas Nepali mass interested in earthquake safe building construction.

Program Output

- Increased level of awareness on earthquake risks
- Large group of audience with basic know-how on earthquake preparedness
- Convinced audience on the need to make their residences safer against earthquake

10) EARTHQUAKE VULNERABILITY TOUR

Vulnerability Tour is one of the several efforts of NSET towards enhancing level of awareness and also for educating people on the need of investing in earthquake vulnerability reduction initiatives in Nepal. It is a guided tour in a defined route or a defined location to observe different vulnerability factors. The Earthquake Vulnerability Tour is an innovative awareness tool initi-

ated by NSET. The tour aims to point out how vulnerable the city's buildings and critical facilities, such as schools and fire stations, are to earthquakes. This tour will help to know the ground reality of our cities which may help to reduce the level of earthquake risk in Kathmandu Valley.

The participants of the tour are encouraged to take part in the discussion on existing vulnerabilities along the route and their potential remedies. A range of hazards, primary as well as secondary, is considered and discussed for the locality. Likewise, all the phases of disaster, from the onset of the event through the problems of rescue and response, rehabilitation, reconstruction and the necessity of introducing mitigation in the reconstruction, are talked about during the tour at appropriate moments. The discussion is mostly informal.

The tour allows and encourages the participant to identify the vulnerabilities in a neighborhood, to assess the extent of the problem, and to explore possible measures that needs to be promoted and implemented. The entire exercise appears to make very intense impact on the participant.

Objectives

- To convince common people for the policy/decision makers and the international community on urgency of urban earthquake vulnerability reduction initiatives.
- To help develop perception of existing seismic vulnerability of building structures, life line structures and their combination
- To help champions develop their own vulnerability tour in their own wards/cities
- To aware and stimulate the local people to find ways to vulnerability reduction

Activities

This is an informal tour hence participants are free to observe as much as they want within the specified route.

Methodology/steps

1. Separate participants in to groups consisting heterogeneous professionals of 8 to 10 people
2. Each group will be provided a guide map.
3. The group can be further sub divided to look after different issues if required.
4. Different group observe differently- walk separately in the same route.
5. Start tour from specified point and follow the route given in the guide map.
6. With the help of guide map, observe existing building stocks, infrastructures, critical facilities (electricity, telephone, water supply), and existing capacity/ facilities

7. Study existing structures keeping view of earthquake hazard and determine in a group about the possible consequences after earthquake - condition of buildings, roads, cables and poles, telephone cabinets, road blockade, fire etc.
8. Analyze available capacity to response- access road for response, open space for evacuation, available resources in the community, food and water stock, human resources (medical, search and rescue, providing shelter and other necessary items, volunteers)
9. Discuss what people realize from past earthquakes and what they think is necessary to reduce existing vulnerability
10. Summarize the result in a group and share the findings with other group
11. Express your suggestions/ recommendations to reduce existing vulnerability.
12. Demobilize - good bye

What is done in Earthquake Vulnerability Tour?

Systematic observation of:

- the building typology
- defects in constructions
- Floor height
- difference in floor level and their effect to each other
- Shop Front

Other aspects of disasters are also covered, such as:

- probable damage in life line structures, health facilities
- post earthquake effects, probable secondary hazards
- difficulties in search and rescue

Project Outputs

The tour has turned out to be an effective disaster risk communication tool. It provides the sentimental environment of probable earthquake scenario, which in turn drew more and more buy-in from all sectors in the success of the program. Further the Tour Guidebook was also developed. The entire exercise appeared to make very intense impact on the participants.

But still there is a need to develop Volunteers who can develop such tours in their respective communities. Further there should be more informal discussion to get more success and the participants should be encouraged to identify the vulnerabilities in their neighborhood.

11) COMMUNITY INTERVENTION THROUGH SCHOOLS

Schools are the focal point of any community and this is a matter of concern for all. Any activity in schools has far reaching effect. By raising awareness in schools, the entire community is reached because les-

sons trickle down to parents, relatives, and friends. Seeing the high potential for schools to introduce seismic protection at the community level and train craftsman, NSET-Nepal is conducting a program to strengthen existing school buildings and promote more earthquake resilient school buildings since 1999 AD in different areas of Nepal under its School Earthquake Safety Program (SESP). SESP is one of the on-going components of KVERMPAPIP with the initiative of making schools safer against earthquakes that not only protects school children, but educates communities to protect themselves. A holistic vision has taken towards seismic protection of schools and all the stake holders such as school staff, students, local community, local and central government, local clubs has been involved in the process so that they can be made aware of risk and can be taken into trust. The school building strengthening program is taken an opportunity to train masons, technology development and transfer recognizing their accessibility to potential house owner and their role in safer construction.

The program was successful in creating a demand for earthquake resistant construction through demonstration of earthquake resistant construction, awareness raising in community; and developing a supply mode on earthquake resistant construction through on-the-job training to craftsman at the school construction site. The program was successful in creating a discussion between craftsman and engineers and it was able to link local indigenous knowledge with the modern one. Significant improvement in quality was observed in the subsequent buildings where these craftsmen worked later. These masons were able to convince the potential house owners for incorporation of earthquake resistance in their house and replication of the work has been seen around the school buildings.



Figure 16 Participants observing vulnerable location during Earthquake vulnerability tour

Awareness Raising, Training of Teachers, Parents, and Children

SESP was implemented with maximum participation of the central and local government institutions, school management systems, the parents and the students. The government agencies provided nominal funds and policy guidance, while the actual implementation of construction works was handled by the school management committees with technical inputs and supervision from NSET. Such implementation mechanism, together with the formation of central, district, and school level advisory committees at central and district government level, considerably widened the outreach of the program and its ownership.

An Earthquake Kit has been developed for training the teachers and the parents on earthquake preparedness planning and establishment of evacuation and fire drills in the schools. Several meetings were held with the local communities and the school officials.

All these efforts have resulted in greater awareness in the communities on earthquake disaster risk and risk reduction possibilities. A qualitative judgment on the impact will be made following the completion of the second leg of the social impact survey. However, it is seen that new constructions in the settlements surrounding the schools are incorporating seismic-resistant elements, mostly by consulting the SESP masons. A strong replication potential of the program concept, and hence sustainability of efforts, is thus evident.

Technical Assistance during Construction

NSET carries out survey and, design, and also assists to implement the construction. Usually, the local masons are engaged in the construction; contractors are avoided. NSET also provides construction supervision. During construction, the masons are trained in aspects of earthquake safety. A mason who had been trained



Figure 17 School hand over program

earlier is posted at each construction site at NSET's cost. The mason supervises the day-to-day construction and trains the local masons on-the-job. NSET engineers conduct classroom training in the evenings. Usually, such training programs are attended not only by the masons, but also by the parents and other members of the community.

Replication potential

In all the communities where SESP has been conducted, people in the adjacent areas have been replicating the construction methods employed in school building to construct their private houses without intervention from NSET. Excepting some minor details, most of the newly-constructed houses in the vicinity of the school adopt all basic earthquake-resistant construction elements like seismic bands, stitching of masonry walls at the corners, vertical tensile rebars etc. It shows higher level of acceptability on what masons were trained. It can be said that the process of replication would gain strength in future to set a new technological culture in construction. In this respect, the SESP has much higher social value compared to other risk reduction programs that hardly have been able to transfer technology to the grass root level in the past decade.

Project Outputs

- Structural Intervention for earthquake-resistant structure
- Retrofitted schools in Kathmandu Valley
- Training of Masons and technicians through school retrofitting and new construction program
- Development of Emergency Response Plan including training of teachers, parents, children (drill) and the community
- Raised awareness about earthquake hazards and preparedness of common people, school family and others

This program is very successful in promoting community participation in all components of program activities and to raise earthquake awareness significantly. The masons trained during the program are now spreading the technology of earthquake-resistant construction in their communities and replicating the technology while constructing new buildings. They are also training other masons. Thus the process of replication (i.e., replicating the construction methods employed in school building to construct their private houses) would multiply in future to set a new technological culture in construction. Further the experience gained, consolidated in the form of Hand Book for Seismic Resistant Construction and Retrofitting of School Buildings in Nepal and preparation of Mason Manual.

Lessons Learned

- School is the best point to enter into community level
- School Earthquake Safety Program is a complete program
- SESP is a platform to produce/develop appropriate technology
- Management model in SESP can be used in any community development work as model
- Transparency plays vital role in community based programs
- Best practice for technology transfer is replication
- Training Program for Mason is essential for a Successful School Earthquake Safety
- Retrofitting is an affordable solution for Nepalese Schools

These innovative approaches of NSET received wider national, regional as well as international endorsement. UN ISDR awarded NSET with Sasakawa Award (Letter of Merit) in 2002. The approaches of NSET were recognized useful in many countries of the region, and so, NSET started getting invitation and opportunities of assisting communities outside Nepal in implementing aspects of earthquake risk management. Thus NSET has put tremendous efforts at wider knowledge sharing and effective management towards a better understanding of earthquake risk, for reducing the risk factors and assisting communities for better preparedness

Impact of Awareness Activities

There are several evidences that indirectly show the positive impact in raising earthquake awareness in Kathmandu Valley and in Nepal due to multi-front programs of awareness. Some of these are listed below:

1. The government and the other organizations have recognized our efforts and have come to work in close coordination with us
2. Sharp increase in the number of request for lecture on earthquake risk of Kathmandu and ways to reduce it from various communities and organizations including VDCs, municipalities, professional groups, business community, international agencies, UN agencies, academic institutions, and NGOs/INGOs. Such requests are constant nowadays.
3. Our orientation programs have been widely accepted and appreciated by national and international organizations.
4. There has been a sharp increase in the number of earthquake-related articles in print media. The topic is covered in electronic media also very frequently.
5. Many of the producers of construction materials

(steel, bricks, cement) refer now to the earthquake hazard for marketing their product as giving earthquake-resistance.

6. Implementation of the national building code in construction in municipality. Lalitpur Sub-Metropolitan City (LSMC) has incorporated Nepal National Building Code into building permit process, which incorporates earthquake resistant features of building construction, as municipal bye-law and other municipalities are working towards it.
7. The health sector disaster preparedness and emergency response plan considers MMI IX as the worst-case scenario to base the plan.
8. There is an increase in the number of request for technical assistance for the construction/retrofitting of public and private schools. Agencies that assisted communities to construct school building now approach NSET for technical assistance in increasing numbers.

Lessons Learnt

1. Establishment of the Earthquake Safety Day helped much in awareness raising. There is an opportunity for replicating the successes of School Earthquake Safety Program (SESP). NSET is now working very closely with the Ministry of Education and its subordinate agencies. The response received from various institutions of the replication cities of Pokhara and Dharan has been very positive. Planning process has been initiated to identify optimal programs for the cities for earthquake risk management.
2. There is a marked increase in the level of awareness on earthquake risk and possibilities of preparedness among the general public of Kathmandu Valley. A simple survey of 1500 households, carried out by GHI and NSET showed a relatively high level of felt-need for seis-

mic safety. Obviously there is a shift in attitude from the traditional fatalistic approach to that of action.

3. Representatives of the business community, especially those producing construction materials such as bricks and steel, and those producing/trading in supply of emergency materials are increasingly interested in working with NSET to learn more about their role in disaster management and emergency response planning.
4. Training programs organized by NSET for the media representatives during the past years have a positive imprint in the quality of coverage on the media. There have been frequent coverage by the media be it the interviews aired through the radio, TV interviews and chat programs or the national print media.
5. Scenario and action planning process helped propagate pertinent suggestions and advice from the science of seismology, earthquake engineering and geology to administrators, decision/policy makers and the common man. It helped create gradually a demand for a practical use of science in disaster mitigation.
6. Awareness raising became part of all project components. Raising awareness was originally stated as a project objective, but in long run it became clear that raising awareness is, in fact, a crucial component of each earthquake risk management activity. Every activity is shaped to raise the awareness of different groups - government officials, media, international agencies, etc.
7. It is surprising to find that release of the results of loss estimates did not create any panic in the population. It rather made a larger part of the society wanting to improve the situation. Now, it is believed that the traditional belief of possible generation of panic should not be used as an excuse for not releasing information on risk.



Figure 18 Orientation program to teachers, students and parents

12) CONCLUSIONS

There are about 13 major programs of NSET Nepal highlighted in this report. The nature of the programs varies from earthquake awareness raising activities such as, publications, orientations, demonstrations, radio / TV programs and earthquake clinics that encourage house owners to build earthquake safe houses to technical support such as mason, engineer trainings both inside and outside of the country including construction of earthquake safe schools in Nepal. NSET is further involved in community based disaster risk management activities. Along with several partners such as municipalities, UN agencies, other potential donors etc., NSET has conducted community disaster risk management trainings at different places of the country. NSET is also involved in several research activities and advocacy to the government in making sound disaster risk management policies.

(5)Overall Conclusions

Case study from NSET Nepal highlights 13 major activities in the field of disaster risk management. Activities of NSET includes earthquake awareness raising through orientations, demonstrations (Shake Table), earthquake clinics (Mobile and Friday Free Clinic), technical support, trainings (mason and engineers), community based disaster risk management programs, school safety and advocacy to the government.

3. Disaster Education in Japan

Takako Chinoi
Asian Disaster Reduction Center

3.1 Introduction

The importance of disaster-prevention education was particularly recognized upon the Great Hanshin-Awaji Earthquake disaster. Since then, disaster-prevention programs have been actively implemented, such as education to raise awareness of local residents, training to foster disaster management leaders and disaster-prevention expert training at education institutions. More recently, as to training for local residents and disaster management leaders, various entities are organizing and implementing programs involving a whole community, in view of designing sustainable programs and developing a local disaster-prevention network.

Education and training for administrative officers, with an emphasis placed on operational and effective skills, are also promoted. Some private corporations have started their own disaster-prevention activities in cooper-

ation with a local community. They also provide their employees with disaster-related education.

This report introduces some successful disaster-prevention education programs for local residents and to foster experts, as well as those implemented at companies and administrative offices, drawing much upon the information posted on the Internet.

3.2 Education to enhance the general public's awareness of disaster prevention

It is important to enhance local residents' awareness of disaster prevention as the first step toward minimizing damage that would be caused by disasters. As activities to improve the awareness of disaster prevention of local residents, lecture meetings on disaster prevention, disaster drills and workshops are organized.



figure1 web site- "challenge plan on disaster education" by cabinet office
Reference: <http://www.bosai-study.net/top.html>

Recent disaster drills incorporate patrols, puppet plays, and bucket brigades, in addition to conventional evacuation and fire-fighting drills. To promote such activities by local residents and disaster-prevention activities at schools, the Cabinet Office and the Fire and Disaster Management Agency of the Ministry of Internal Affairs and Communications commend outstanding disaster-prevention activities by local residents and schools every year and make public the activities on the Internet websites.

In recent years, the importance of disaster prevention education at younger ages has been recognized. Last year, a Disaster-Prevention Education Handbook for kindergartens and nursery schools was published by the Japan Society of Civil Engineers. Some programs in kindergartens and nursery and elementary schools have started. This section introduces some successful disaster-prevention education programs for local residents. It also showcases outstanding cases of disaster-prevention education mainly for elementary schools and local communities.

(1) Elementary schools

In addition to evacuation drills, practical programs have been organized as people realize the importance of disaster-prevention education at elementary schools. Some main reasons why an earlier start of disaster-prevention education is beneficial are as follows.

- By taking an interest in disaster prevention at an early age, children can pick up the habit of thinking about disaster prevention.
- Children tend to talk about what they have learnt to their parents. It could, in turn, raise the awareness of disaster prevention of local community.
- Because people usually learn about places with danger in their childhood, it is effective to give them disaster-prevention education to enable them to make quick and appropriate judgment in an event of disaster or emergency. People never easily forget what they learnt at their early ages, and therefore, it is meaningful for children to gain various experiences through disaster-prevention drills.

Schools have started not only programs within schools, but also initiatives promoted in cooperation with local administrative organizations and universities and other education institutions. This section showcases some programs demonstrating that schools are proactively undertaking disaster-prevention education as a member of a local community.

At elementary schools, disaster-prevention education has begun in recent years, for integrated study or as an optional subject. Inventive drills and workshops have also been implemented. In many cases, disaster-prevention workshops are incorporated in the integrated study. However, this report deals with the drills and workshops

held within a framework of the integrated study and those conducted as special events, separately.

① Disaster-prevention education conducted within the framework of existing school subject education

Teaching materials and teacher training

To pass down the lessons from the Great Hanshin-Awaji Earthquake Disaster 1995 and learn about disasters, the Hyogo Prefectural Board of Education prepared supplementary reading materials for students for classroom use. Different reading materials have been prepared for lower grades and higher grades of elementary schools, junior high school students and for senior high school students, respectively.

The supplementary reading materials for elementary school students feature local residents' experiences of previous disasters in Hyogo Prefecture. It also provides a detailed account of earthquakes and basic disaster prevention measures. The materials for junior and senior high school students explain mechanisms of earthquakes, earthquake damage such as liquefaction, specific disaster prevention measures including emergency lifesaving techniques and simple anti-seismic reinforcement.

Teaching materials and teacher training program

Objective: To pass down lessons from the Great Hanshin-Awaji Earthquake Disaster and learn about Disaster

Main Target: students of elementary school, junior and senior high school

Main Activities:

- Disaster education in school
Development of educational material Learning Disaster
- teachers' training
- Development of manual for emergency management
Organizers: Hyogo Prefecture Board of Education



Picture 1 Reading materials about natural disaster and disaster management in elementary school

Teacher training programs include district disaster-prevention education seminars, courses to foster advisors to promote disaster-prevention education and seminars for teachers in charge of mental care (to heal the mental scars of disaster-affected children or/and parents) in relation to the Great Hanshin-Awaji Earthquake Disaster. At each school, teachers who have attended the district disaster-prevention education seminars report disaster exercise to all the other teachers. Teaching materials that make use of local subject matters have also been developed. To enhance teachers' disaster-prevention capabilities, simulation of establishing an evacuation center is also conducted.

Reference: the Hyogo Prefectural Board of Education

Cases within a framework of existing school subject education and integrated study

Hokkaido Disaster-Prevention Education Panel holds seminars for teachers and conducts science classes, in cooperation with Sapporo District Meteorological Observatory, Hokkaido Science Education Center and Crisis & Environment Management Policy Institute. For evacuation drills, the organizations also produce learning materials for students and presentation documents and explanatory materials for teachers and conducted classes and evacuation drills at model junior high schools.

In the science classes, by taking the 2003 Off-Tokachi earthquake and the southwest-off Hokkaido earthquake as example, lectures are given on basic knowledge on tsunami and how to protect oneself from tsunami. Questionnaires conducted before and after the classes revealed that the classes were effective in raising awareness of evacuation.

Developing Teaching materials in science class

Objective: Raising awareness of students and local residents for disaster preparedness

Main Target: Students of junior high schools

Main Activities:

- Development of educational material
- Seminars for teachers
- A model class that utilized the tsunami disaster-prevention material

Organizers: Hokkaido Disaster-Prevention Education Panel

Partners: Sapporo District Meteorological Observatory, Hokkaido Science Education Center and Crisis & Environment Management Policy Institute

Reference: <http://www.bosai-study.net/houkoku/plan12/inde.html>

(2)Drills and workshops

Activities at an elementary school

With the collaboration of residents' associations and Ichikawa Municipal Government, 135 sixth-grade students at Gyotoku Elementary School in Chiba Prefecture take part in a disaster drill, develop a disaster prevention map and participate in an experience-based class provided by Chiba Prefecture West Disaster Control Center. These activities not only raise the students' awareness of disaster prevention, but also increase the awareness of the local community.

During the disaster drill, participants conduct a drill of handing over students to their parents (a drill to perform a procedure of handing over children from school to their parents in an event of a warning declaration), concurrently with an evacuation drill. Safety along school routes is also checked with the parents.

Drills and making disaster prevention map within community

Objective: Raising students and local residents awareness in disaster preparedness

Main Target: 135 sixth-grade students and parents at Gyotoku Elementary School in Chiba Prefecture

Main Activities:

- disaster drill
- disaster prevention map

Organizers: Gyotoku Elementary School, Chiba Prefecture West Disaster Control Center

Partners: residents' associations and the Ichikawa municipal government sis & Environment Management Policy Institute

During the workshop, the students charted their own disaster prevention maps with assistance of *Gyotokukko Mamoritai*, which is a kind of squad protecting kids in the Gyotoku area, established in March 2004 within the Gyotoku area of Ichikawa City senior citizens' club. The team is dealing with suspicious individuals and engages in traffic safety and crime prevention activities. The students checked the complete maps later with graduate school students.

In addition, they reach out to residents within the school district to draw up "my family's disaster-prevention plan," issue disaster-prevention newspapers and put up posters to raise disaster-prevention awareness.

Gyotoku Elementary School evaluate that the programs are effective, because many students state that they have less fear of disaster than they used to do after they underwent the disaster prevention programs.

Activities of the Building Research Institute

The Building Research Institute (BRI), Tsukuba, provides elementary and junior high school students with



Picture 2-1 Disaster prevention map preparation



Picture 2-2 Disaster prevention map preparation

an opportunity to build a simple model house and observe the model shaking on a shaking table to make them understand the mechanism of an earthquake-resistant house.

Making a simple model house and shake table demonstration

Objective: learn the importance of earthquake-proof by understanding the mechanism of an earthquake-proof house

Main Target: elementary and junior high school students

Main Activities:

- building a simple model house and observe the model on a shaking table test

Organizers: Building Research Institute

Partners: Fukuwa Laboratory of Nagoya University

Such demonstration of the effect of use of reinforced structure on a house, using a simple shaking table, is conducted at workshops in and outside Japan. For this demonstration, a 1/10th scale model house that meets the current earthquake-resistant standard and one that fails to meet the standard are used. Developed by Fukuwa Laboratory of Nagoya University, both models are placed on the small shaking table to show the impor-

tance of earthquake-resistant capability visually.

Reference: <http://www.kenken.go.jp>

(2) Education for the general public

Many of previous disaster-prevention education programs placed a primary emphasis on acquirement of basic knowledge. However, in recent years, drills, training and forums are organized with their purposes clearly defined. For each drill and training, specific objectives are established. Drills and training are promoted through cooperation between local governments and communities to take advantage of local characteristics. Especially, for disaster management leader training programs, practical programs have been conducted. Job descriptions of the leaders are articulated and program goals are established. Also arrangements are made for program participants who completed such training to be assured to play a role in a local community. This section introduces some successful disaster-prevention education programs for general public.

① Lecture meetings and seminars

Many lecture meetings and seminars for the general public, local voluntary disaster management organizations and disaster management leaders have been held by local governments, department of fire management, academic institutions and NPOs. A School of Safety Leader and Japan Bousai-shi Organization provide certificate programs that give qualification for the leader of disaster prevention.

Activities by a local government

Kasugai City in Aichi Prefecture offers a series of courses at Safety Academy to enable the citizens to think and act on their own for safety of the local community. The Academy has set up the Basic Disaster Prevention Course and the Basic Community Safety Course in the Safety Department and the Children's Growth and Development Course in the Parent-Child



Picture 3 Student handover drill

Education Department. Each course consists of seven sessions and is attended by 50 students.

**Safety Academy
(Basic Disaster Prevention Course)**

Objective: to enable the citizens to think and act on their own about safety of the local community

Main Target: general public

Main Activities:

- offers a series of courses at Safety Academy
- raising “vonitor”

Organizers: Building Research Institute

Partners: Fukuwa Laboratory of Nagoya University



picture 4 Activities of vonitors

In the Basic Disaster Prevention Course of the Safety Department, lectures are provided on the topics such as impending Tokai and Tonankai Earthquake and earthquake-proof measures; disasters and local communities; psychological care for victims; disaster-resistant community development on the initiative of citizens; the lessons of Niigata Chuetsu Earthquake and the Great Hanshin-Awaji Earthquake and disaster communications network.

The municipality also trains a “vonitor” (a coined word made of volunteer and monitor) who can participate in activities of each community after he/she completed an Academy's course. *Vonitors* participate in crime prevention activities such as patrolling school routes and give instructions in a disaster prevention map exercise (DIG: Disaster Imagination Game¹) and teach residents how to make slings and portable stoves during local disaster drills.

Reference:
<http://www.city.kasugai.aichi.jp/somu/shiminanzen/gui-top-a99a.html>

¹ Disaster Imagination Game(DIG) is the drill to discuss the countermeasures against disaster by using map

Activities by a NPO

NPO Tokyo Portal hosts a forum on anti-seismic reinforcement on a regular basis. Aiming for the “Save House, Save Life, Save Community” and “anti-seismic reinforcement” national campaigns, the NPO organizes lecture meetings and panel discussions on anti-seismic reinforcement. A wide array of talents including academic experts, national and local government officials and people involved in anti-seismic reinforcement serve as lecturers. Each forum is attended by more than 200 local residents.

Raising Public awareness of anti-seismic reinforcement

Objective: Save House, Save Life, Save Community” and “anti-seismic reinforcement” national campaigns

Main Target: general public

Main Activities: a forum on anti-seismic reinforcement

Organizers: An executive committee of forum on anti-seismic reinforcement

Partners: Cabinet Office, Fire Management Agency, Ministry of Land, Infrastructure and Transport, Tokyo Metropolitan Government, Junior chamber International Japan, National Research Institute for Earth Science and Disaster Prevention, The Japan Building Disaster Prevention Association, Japan Society of Civil Engineers, Architectural Institute of Japan, the Japanese Geotechnical Society, Japan Association for Earthquake Engineering, The General Insurance Association of Japan, The Japan Institute of Architects, Japan Federation of Architects & Building Engineers Associations, The Institution of Professional Engineers, Japan, NPO Tokyo Portal, Professional Engineers Association of Urban Disaster Preparedness, Community Support Research Group for Disaster Preparedness (“chiiki bousai shien kennkyuu kai”,tentative translation)

Reference: <http://www.tokyo-portal.info/20021225.html>

② **Drills and workshops**

Activities by the local governments

A drill is conducted at Urato Elementary School by Kochi City and Kochi Prefecture government without previous notification to teachers and students about the details of the drill. This is to estimate an exact situation in an event of actual tsunami. The drill is conducted on a day of classroom visitation and parents also participate in the drill. The parents are notified that the drill would be conducted on the day. However, they are not informed of details of the drill.

A drill without previous notification

Objective: drills to consider how the local community should take continuous measures to control tsunami disasters

Main Target: teachers, Elementary School students, parents

Main Activities:

- drill
- discussion on the evaluation result

Organizers: Kochi City and Kochi Prefecture government

Partners: Urato tsunami disaster prevention council, Kochi City government, Kochi Prefectural government and academic experts

After the drill, a follow-up meeting on the Urato Elementary School's tsunami disaster evacuation drill is held, with the participation of Urato tsunami disaster prevention council, Kochi City government, Kochi Prefectural government and academic experts. Using an evacuation behavior checklist, behaviors of teachers and students are evaluated at the three particular points of time of the drill: (1) when an earthquake occurs; (2) when they are evacuating and (3) when the participants get together at an evacuation site. Based on the evaluation result, the meeting engages in active discussion. In addition to the discussion on the evacuation drill, various opinions are expressed on how the local community should take continuous measures to control tsunami disasters.



Picture 6 Evacuation on the assumption that a usual escape route cannot be used
(Impassable stairs and roads due to fire are set.)



Picture 7 Obstacles (sponges, cardboards, grass, etc.) that are compared to droppings are placed on the escape route.



Picture 5 Evacuation starts (By using smoke, a fire breaking situation is simulated.)



Picture 8 An experience on an earthquake simulation vehicle



Picture 9 How to make a stretcher



Picture 10 Disaster-prevention "ultra" quiz (True-or-false questions are asked. Only those who give a correct answer can answer the next question. Several quiz questions are asked and a person who could continue to give a correct answer to the last wins the quiz.)

Reference:

<http://www.bosai-study.net/houkoku/plan08/index.html>

Activities by schools

Toyoake Municipal Misaki Elementary School conducts a disaster-prevention day for parents and children at the school to provide an opportunity for the parents and children to learn about earthquakes together. For the drill, the participants take part in a session to learn measures for preventing furniture from falling, experience a simulated earthquake and try a practice of water extinguisher.

At Misaki Elementary School, a joint earthquake disaster drill is conducted through the collaboration between Toyoake City and local residents of the three districts covering the elementary school area. The drill features a practice of water extinguisher, a bucket brigade and an evacuation drill. Disaster prevention maps produced by students are displayed at the site.

A disaster-prevention day

Objective: to provide an opportunity for the parents and children to learn about earthquakes together

Main Target: Elementary School students, parents

Main Activities:

- preventing furniture from falling,
- experienced simulated earthquake
- a practice water extinguisher

Organizers: Toyoake Municipal Misaki Elementary School

Partners: Fukuwa Laboratory of Nagoya University



Picture 11 Practice water extinguisher



Picture 12 Bucket brigade

Activities by NPOs

The regional development center for Development of Power Supply and Tokyo Electric Power Services Co. LTD. (TEPSCO) conducted three day disaster-prevention workshops in Okuma Town in Fukushima Prefecture for local residents. The workshops aimed mainly at raising the people's awareness of disaster prevention and cultivating a disaster management leader. During the workshops, the residents learnt basic knowledge on disaster prevention and disaster risks that existed in the community. They examined disaster-prevention measures to be taken on their own or through the community



Picture 13 Evacuation drill that took disaster backup people into consideration



Picture 16 Making disaster-prevention map



Picture 14 Disaster prevention maps produced by students



Picture 17 Explaining the disaster prevention map

cooperation. The participants gained better understanding of the disaster management leaders and the roles played by the leaders in the previous disaster cases.

Through the workshops, the residents became able to recognize disaster prevention as their own issue. On the last day of the workshop, the residents came up with many specific and feasible disaster-prevention measures. This is one of the significant results of the workshop.



Picture 15 Town watching

Reference:

<http://www.misaki-e.aichi-c.ed.jp/> (Misaki Elementary School)

Disaster-prevention workshops

Objective: raising the people's awareness of disaster prevention and cultivating a disaster management leader

Main Target: local residents

Main Activities:

- learning basic knowledge on disaster prevention and disaster risks
- town watching
- making disaster map

Organizers: The regional development center for Development of Power Supply, TEPCO

③ Materials for drills and workshops

Kochi Prefecture introduces materials available for disaster-prevention education in a user-friendly format on its website. The examples below are excerpts from the website. In addition to the examples, many other materials with which users can learn with fun, such as disaster-prevention festivals, disaster prevention map making, plays featuring Kochi Prefecture's disaster-pre-

vention icon characters in puppets and stuffed animal suits, picture-card shows and dances.

Experience-based materials

"Newspaper slippers," "covering a window with anti-scattering film," "cardboard toilet for use in emergency," "turning around your arm for 100 seconds and experiencing a shaking of the intensity level of the Nankai Earthquake (devised by Professor Makoto Okamura, Faculty of Science, Kochi University)," "Experiencing weight of emergency kits and water," etc.

Games to raise disaster-prevention awareness

"Asobosai Karuta (playing cards) for children from toddlers to higher-grades at elementary school," "*Bosai DUCK* for children from toddlers to lower-grades at elementary school - materials for children to learn how to protect themselves from disasters and daily risks through actually moving their bodies, vocalizing and playing," "*Bosai Ekiden* for people from higher-grades at elementary school to adults - Contenders answer threefold-choice quiz on disaster prevention in a *sugoroku* game," "*Dainamajin Disaster-Prevention Sugoroku* for people from higher-grades at elementary school to adults," "*Crossroad* for people from high school students to adults," etc.

Reference:

<http://www.pref.kochi.jp/~shoubou/hyakka/hyakka.html>

(3) Conclusion

In recent years, as entities providing training have diversified, various sustainable disaster-prevention education programs, with potential of developing into a local network, are provided. The following tasks can be regarded as challenges for the future: 1) Creation of a network with a local community to implement disaster prevention education; 2) Sustainable framework that is suited to local characteristics; 3) Starting disaster prevention education at younger ages. It is also required to develop a educational scheme for communities and people who are uninterested in disaster prevention.

3.3 Education for development of professional human resources

In order to mitigate damage from disasters, disaster prevention education must be provided for residents so that each of them can acquire skills to survive in the disaster. For that purpose, it is important to develop professional human resources underpinning such disaster prevention education. Many domestic organizations are making various efforts toward development of

domestic and international professionals. Efforts are being made to develop human resources with practical and effective capabilities to help local communities improve their disaster prevention potential. Administrative organizations are fostering expert volunteers necessary to lead disaster prevention measures.

High schools, universities and graduate schools provide cross-sectional disaster management courses and technical colleges offer specialized educational programs. Some local communities give students in higher education opportunities to conduct classes on disaster prevention at elementary and junior high schools as a part of their own learning. This is an undertaking for the students to learn by teaching. This section will introduce examples of such efforts made in domestic organizations as well as in higher education institutions.

(1) Activities by local governments and others

Many local governments are developing disaster prevention leaders and providing trainings for administrative officers. The following is an example of an effort made by a city, toward the development of disaster prevention leaders who can evaluate the earthquake resistance of wooden houses.

Reference: <http://bousai-navi.air-nifty.com/training/>

(2) Trainings

Activities of Matsushima-city

Matsushima-town, Miyagi Prefecture offers a training course on the earthquake resistance evaluation of wooden houses, aiming at creating "an earthquake-resistant city inherited through the generations", and facilitates the interaction between young people and adults.

The training, which aims at developing district leaders (local disaster prevention leaders), is provided for local construction professionals and other professionals who are interested in disaster prevention.

In the three-day training for the development of earthquake resistance evaluators, participants learn knowledge on earthquakes, earthquake resistance evaluation of wooden houses and aseismic capacity of concrete block fences. They experience practice of teaching and, on the last day, they serve as an assistant teacher in actual classes for the earthquake resistance evaluation. Local disaster leaders who had completed this training act as instructors for the earthquake resistance evaluation.

Reference: "Study on Planning of Earthquake-resistant town with Continuous Generation" (Part 2 - Training of Disaster Prevention for District Leader, Part 3 - A Lecture on Aseismic Building

Training course on developing local disaster prevention leaders

Objective: creating “an earthquake-proof city inherited through the generations” and developing local disaster prevention leaders

Main Target: local construction professionals and other professionals who are interested in disaster prevention

Main Activities:

- training course on the earthquake resistance evaluation of wooden houses

Organizers: Matsushima-town, Miyagi Prefecture

Partners: Reiji Tanaka Laboratory of Tohoku Institute of Technology(Archi.Dep.)

Diagnosis of Wooden House at Matsushima Junior High School), Watanabe Mariko, Ohaga Yoshiki, and Tanaka Reiji (Tohoku Institute of Technology), June 2006, Journal of Architectural Institute of Japan Tohoku Department

(3) Programs in high schools and universities

Maiko High School, Hyogo Prefecture has a special course of disaster prevention. Fuji Tokoha University (College of Environment and Disaster Research), Chiba Institute of Science (Faculty of Risk and Crisis Management) and other universities also have a special course of disaster prevention, where students can acquire integrated knowledge about disaster prevention.

Programs in high schools

Maiko High School has offered a Special Course in Disaster Mitigation since 2002. The purpose of the course is to raise leaders in risk reduction in the community. To this end, students study disaster knowledge, the social environment and the natural environment, and to learn the skills necessary to survive disasters and support the affected areas. Furthermore, the courses aim to convey the lessons and experiences of the Great Hanshin Awaji Earthquake to the next generation.



Picture 18 Study with primary school children (town watching)

Special Course in Disaster Mitigation

Objective: to convey the experiences of the Great Hanshin Awaji Earthquake to the next generation and to raise leaders in risk reduction in the community

Main Target: high school students

Main Activities:

- Lectured by those who experienced the Hanshin-Awaji Disaster (Firefighters, Administrators, Citizens, Architects, etc)
- join the Memorial event of the Great Hanshin-Awaji Disaster
- Map Making, Town Watching, Drills, Experiment of Liquefaction
- Study with primary school students(3rd to 6th Grade)

Organizers: Maiko High School

The course offers a variety of programs. Guest teachers who experienced the Hanshin-Awaji earthquake give lectures. Students participate in activities including memorial events of the Great Hanshin-Awaji Earthquake, disaster prevention map making, town watching, emergency drills, and so on. High school students teach 3rd to 6th grade elementary school students about safety map making, and the mechanism of the Hanshin Earthquake.



Picture 19 Study with primary school children (safety map making)

Reference:

<http://www.hyogo-c.ed.jp/~maiko-hs/> (Maiko High School)

Programs in universities

Department of Disaster System Science, Chiba Institute of Science offers classes on urban disaster (studies on fundamental mechanisms of combustion and fire, methods of precise forecast, prevention and control, etc.).

Graduate school of Fuji Tokoha University offers classes on environment and disaster prevention planning/management, where students can obtain a master's

	Class
Environment and Disaster Prevention Planning	Theory of International Disaster Prevention Cooperation
	Theory of International Development Management
	Special theory of Environmental Change and Disaster Prevention Science
	Information on Disaster Prevention Geography
	Urban Risk Management
Environment and Disaster Prevention Management	Special Theory of Environment and Disaster Prevention Study
	Theory of Disaster Prevention Education
	Theory of Earthquake Disaster Prevention
	Theory of Disaster Prevention Geology
	Theory of Disaster Prevention Information

degree in Environment and Disaster Research. It also offers disaster prevention lectures for residents.

translation of these category and class are tentative
 Reference:
http://www.fuji-tokoha-u.ac.jp/graduate_school/daigakuin1.pdf

Activities of technical colleges

Students of Ichikawa Technical High School assist residents in undertaking simple seismic examinations of the housing in the community. Students of the Architecture Department assist in the following activities as shown in the pictures.



Picture 20 Helping residents conduct a simple seismic examination of their housing



Picture 21 Conducting simple seismic examinations of the housing in the community as a whole

Conducting simple seismic examinations of the cultural assets of the community

Students of the Architecture Department conducts simple seismic examination of housing and cultural assets, together with NPOs, local government administrators, the Architectural Institute of Japan, universities, the Association of Registered Architects, and a local *jichikai* (a neighborhood self-governing body).

They assist residents in conducting simple seismic examination of their own housing. If they discover houses with low earthquake-resistant structures, they introduce the relevant department of the local government to the residents/owners. Secondly, students visit the area, and conduct simple seismic examination of the houses with residents.

simple seismic examinations by Technical High School students

Objective: Using technical knowledge, raising Public awareness in anti-seismic reinforcement

Main Target: local residents, community

Main Activities:

- Helping residents conduct a simple seismic examination of their housing
- Conducting simple seismic examinations of the housing in the community as a whole
- Conducting simple seismic examinations of the cultural assets of the community

Organizers: Ichikawa Technical High School

Partners: local government administrators, the Architectural Institute of Japan, universities, the Association of Registered Architects, and a local *jichikai*

Reference: <http://www.bosai-study.net/2006houkoku/plan23/index.html>

3.4 Education for development of professional human resources in developing countries

Developing countries in disaster-prone areas remain vulnerable against disasters. Improving safety in developing countries demands the development of appropriate technology and policies that consider the actual conditions and systems of each country. Responsible experts must enhance their capability to make and implement suitable policies. In Japan, a master program for bringing up experts in disaster management in developing countries is offered.

(1) Program of the National Graduate Institute for Public Studies (GRIPS)

In order to enhance the capacity of professionals in developing countries to cope with natural disasters, the National Graduate Institute for Policy Studies (GRIPS) offers a Master's degree program in Disaster Management Policy. This Program is offered jointly with the International Institute of Seismology and Earthquake Engineering (IISEE) of the Building Research Institute (BRI), the International Centre for Water Hazard and Risk Management (ICHARM) of the Public Works Research Institute (PWRI), and the Japan International Cooperation Agency (JICA). Through the Program, students:

- Acquire knowledge in the fields of seismology, earthquake engineering, tsunami disaster mitigation, and water-related disasters as well as basic knowledge necessary for disaster risk management;
- Learn the theories on which disaster management policies are based and study Japanese policies and systems; and
- Through a problem-solving approach, acquire the capability to develop appropriate technologies and policies specific to local conditions.

The program has three courses; Earthquake Disaster Mitigation, Tsunami Disaster Mitigation, and Water-related Disaster Management. The Curriculum of the Earthquake Disaster Mitigation Program is listed below.

Since 1961, more than 900 students from 75 countries have graduated from the program. In 1961, the Building Research Institute (BRI) in cooperation with the Overseas Technical Cooperation Agency (OTCA), which later became Japan International Cooperation Agency (JICA), launched a one-year training program in seismology and earthquake engineering for researchers and engineers from earthquake-prone developing countries. BRI created the International Institute of Seismology and Earthquake Engineering (IISEE) to conduct the program. In 2005, the program was upgraded to a master's program in Earthquake Disaster

Category	Course Name
I Required Courses	Special Lecture
II Recommended Courses	Disaster Mitigation Policy
	Disaster Risk Management
	Earthquake Hazard Assessment
	Earthquake Risk Assessment
	Disaster Mitigation and Development Assistance
	Tsunami Hazard Assessment
	Tsunami Countermeasures
III Elective Courses	Earthquake Phenomenology
	Characteristics of Earthquake Disasters
	Earthquake Circumstances
	Information Technology Related with Earthquakes and Disasters
	Structural Analysis
	Structural Dynamics
	Seismic Design
	Seismic Evaluation and Retrofitting
	Theory of Tsunami
	Case Study (Practice for Earthquake Disaster Mitigation Policy I)
	Case Study (Practice for Earthquake Disaster Mitigation Policy II)
	Case Study (Practice for Earthquake Disaster Mitigation Policy III)
	Case Study (Practice for Tsunami Disaster Mitigation Policy)
	Selected Topics in Policy Studies

Table 1 Curriculum (Earthquake Disaster Mitigation/ Tsunami Disaster Mitigation)

Reference: <http://www.grips.ac.jp/degree/edm.html>

Mitigation, jointly conducted with GRIPS. In 2007, it was again upgraded into Disaster Management Policy Program, which is now conducted jointly by GRIPS, BRI, PWRI, and JICA.

The United Nations Educational Scientific and Cultural Organization (UNESCO) supports the Disaster Management Policy Program due to the educational opportunities the Program offers for professionals across the developing world.

3.5 Disaster prevention education in companies and administrative organizations

(1) Disaster prevention education for companies

Recently, companies are speeding up the establishment of BCP (Business Continuity Planning) and some companies have developed "a disaster prevention plan and relevant manual" and "disaster education and training for employees". In addition to these, advanced companies started to recognize the importance of cooperative disaster prevention measures such as "collaboration with local governments, residents, etc." and "cooperative framework with business partners". Companies and administrative organizations have started training to cultivate operational disaster management skills by setting specific objectives such as initial response and volunteer activities in event of disaster. This section will show some of the initiatives.

① Trainings

The annual hands-on event for disaster volunteers held by Toyota Group is a training seminar mainly led by Toyota Group Disaster Volunteer Net (with approximately 800 registered volunteers). Through hands-on trainings, participants learn the necessary knowledge and know-how for systematic volunteer activities to assist the recovery efforts of disaster victims and aid areas stricken by natural disasters.

At this two-day program, participants hear lectures from volunteers and take part in training for evacuation of people requiring assistance during a natural disaster (such as those with hearing, visual, physical or mental disabilities, as well as the sick, elderly, children, pregnant women or foreigners), so that they acquire knowledge and skills for assisting the self-sustaining recovery of disaster victims and the affected areas.

Participants also experience what it is like to stay in an evacuation shelter, spending the night in sleeping bags at a gymnasium. They learn a variety of information about disaster prevention and disaster response,

such as how to use hybrid vehicles (1,500W) as power sources during a blackout and how to keep furniture from falling over. Other trainings are also periodically held, such as disaster volunteer headquarters operation simulation and workshops on first aid and rope work.

Disaster volunteers by Private Corporation

Objective: to learn the necessary knowledge and know-how for systematic volunteer activities to assist the recovery efforts

Main Target: employee

Main Activities:

- training for evacuation of people requiring assistance
- disaster volunteer headquarters operation simulation
- workshops on first aid and rope work

Organizers: Toyota Group

Reference: http://www.toyota.co.jp/jp/social_contribution/volunteers/v_disaster.html

② Drills

Disaster Prevention Committee of the Former Foreign Settlement of Kobe, located in Kobe city, Hyogo Prefecture, establishes and distributes guidelines for creation of disaster prevention manuals and develops a disaster prevention plan for the former foreign settlement of Kobe. It also holds annual drills for earthquake, flood, high tides and disaster rescue.

The committee, which is now attended by more than 100 companies, was founded after the Great Hanshin-Awaji Earthquakes, participated by offices, local fire department and others. It carries out various disaster prevention activities, such as the establishment of assistance measures for visitors, preparation of a common emergency storage and periodical check of the local disaster prevention plan.

Private corporations and community work together within a business district

Objective: establishing cooperating system of disaster prevention using the network within the area and developing capacity building

Main Target: employee

Main Activities:

- the establishment of assistance measures for visitors
- preparation of a common emergency storage
- periodical check of the local disaster prevention plan

Organizers: Disaster Prevention Committee of the Former Foreign Settlement of Kobe

At the time of the disaster, it will carry out assistance activities for visitors, such as the installation of a rescue booth where local doctors and nurses are dispatched and an information booth where the information on transportation, evacuation, etc. is provided. An evacuation shelter will be provided for visitors from distant areas, for 72 hours after the disaster until the administrative support service is prepared.

Reference:

http://www.kobe2001.or.jp/kyoudou_chuuou/chuuou007.htm
<http://www.bousai.go.jp/>

Dainichiseika Color & Chemicals Mfg. Co., Ltd. is strategically increasing the number of rescue trainings for employees, as well as employees qualified as self-defense fire brigade members and hazardous materials officers every year, for its production factory located in Adachi-ku, Tokyo.



Picture 22 rescue trainings (town watching)

Cooperating system of private corporations and local community

Objective: establishing cooperating system of disaster prevention using the network within the area and developing capacity building

Main Target: employee

Main Activities:

- Increasing the number of rescue trainings
- information exchange meetings with neighboring town councils twice a year
- drills by its own rescue team

Organizers: Dainichiseika Color & Chemicals Mfg. Co., Ltd.

² In the event of disaster, company should secure the safety of workers and customers in the facilities and should prevent from secondary disaster.

As collaboration with a local community, it holds information exchange meetings with neighboring town councils twice a year, as well as has established a plan to dispatch its self-defense brigade when a disaster occurs in the surrounding areas, utilizing its water pool for fire-fighting, indoor fire hydrant and B-2 pump equipped within its site.

Reference:

<http://www.isad.or.jp/> (institute for fire safety & disaster preparedness)

In addition to conducting in-house trainings, it is actively participating in trainings hosted by Adachi-ku or the local fire department. The factory also launched its own rescue team in January, 2005.

③ Conclusion

In addition to establishment of BCP and production of a disaster prevention plan and related manual², it is important to have disaster education which fosters cooperative measures of crisis management such as collaboration with local governments (public private partnerships) and local residents, etc., and a framework for cooperation with business partners in the event of a disaster.



Picture 23 Practice of water extinguisher



Picture 24 Practice of water extinguisher against hazardous materials

(2) Disaster prevention education for administrative officers

At the government level, risk management-related trainings are provided at Fire and Disaster Management College, College of Land, Infrastructure and Transport, Meteorological College, and other organizations. At Fire and Disaster Management College, courses such as "Top Seminar (for high rank officers)" and "Risk Management Workshop" are provided for disaster prevention officers of fire management department, and at College of Land, Infrastructure and Transport, courses such as "Disaster and Preparedness Evaluation" and "Construction Plan III" are provided for disaster prevention officers of the government. These courses aim at cultivating practical skills through drills and trainings as well as lectures.

Local governments are also conducting various train-

ing courses for the officers, and some prefectures provide systematic training courses for disaster prevention. For example, Shizuoka Prefecture offers 4 levels of training programs with specific goals. Japan Academy for Municipal Personnel provides risk management courses for the officers of the cities, towns and villages government. These programs are given greater importance to the development of the officers' readily adaptable and effective disaster control skills.

Training for overseas administrative officers is also conducted in Japan. Foreign officers not only learn Japanese disaster-prevention measures, but also disaster-related workshop techniques and other methodologies. Efforts are made with an emphasis on having them utilize the training they received in Japan in drafting action plans in their home countries.

Training of disaster management practitioners

Spring 2006

Management course <basic>:
Topics: general theory on risk management, understanding of natural phenomena causing disasters, overview of risk communication, and restoration of cities
Number of participants:30

Management course <experts A>:
Topics: disaster responses, relevant ministries and agencies, disaster prevention planning, organizational theory to respond to the occurrence of crises, workshop on disaster using model cases, and other workshops led by local communities
Number of participants:20

Management course <experts B>:
Topics: disaster information, how to make use of damage forecasts, issuance of damage certificates, understanding of various types of disaster, BCP
Number of participants:19

Management course <advanced>:
Topics: video workshop on Great Hanshin Awaji Earthquake, workshop on setting goals, lecture on crisis management, others
Number of participants:10

Courses	Objectives	Target
Management Course Basic	Participants systematically learn basic knowledge such as mechanisms of various disasters, measures and concept for disaster management for each field, etc. based on experiences from the Great Hanshin-Awaji Earthquake.	Personnel of regional public entities responsible for disaster management with less experience.
Management Course Expert	Through exercise and concrete examples of disaster reduction, this course strengthens the capability to understand ways to cope with large-scale disasters comprehensively where various countermeasures should be taken.	Personnel of regional public entities responsible for disaster management.
Management Course Advanced	Based on the experiences and lessons learnt from the Great Hanshin-Awaji Earthquake, we hope to teach courses about policy orientated decision-making issues that may arise when future large-scale disasters strike. In this way, we hope to improve the ability of individuals to assist managers of regional public entities.	Personnel of regional public entities responsible for disaster management expected to maintain the effective management of their divisions.

Figure 3 Curriculum

Reference: http://www.dri.ne.jp/images/english_all.pdf

① Trainings

Disaster Reduction and Human Renovation Institution (DRI)³ provides training courses for disaster prevention officers of local governments. Courses and contents are listed in the table below. Programs and lectures are evaluated in details, by conducting before-after questionnaire surveys toward participants, on operational improvements, behavioral modification, learning effects, etc. and the results are considered in the planning of the next-round program.

In order to create the network of participants, it conducts follow-up trainings, as well as creates a mailing list. Participants are expected to contribute to the regional assistance activities at the time of disaster.

② Drills

Prefectural governments are implementing Drills. For example, Shizuoka Prefecture has implemented a large-scale Drill with the participation of municipalities and disaster prevention organizations, covering the period starting from the announcement of Tokai earthquake warning information to 4 hours after the attack of the earthquake.

In the Drill, preparatory actions taken by self-defense force before the earthquake attack were confirmed, and a coordination meeting was held to discuss on the aggregation of disaster damage information, relief activities of a support team organized by police and fire departments, self-defense force, etc.

On the assumption that the intensity 6 upper was measured in Kikugawa City and intensities from 5 upper to 7 were measured in some other cities in Shizuoka, the Drill was implemented on the launch of a city disaster countermeasures office, collection of information and relevant measures. In addition, self-defense disaster prevention groups within the city conducted disaster prevention trainings, where participants experienced the terror of the smoke, as well as learned about AED (automated external defibrillator), cardiopulmonary resuscitation and water supply.



Picture 25 Large-scale Drill

Reference: <http://www.pref.shizuoka.jp/bousai/seibu/08kunren/2005.kunren.list.html> (Sizuoka Prefectural government)

(3) Education for development of overseas administrative officers

JICA offers the program to share knowledge and experience of Japan, among disaster management officials from various countries in order to reduce the loss of lives due to natural disasters and contribute to the international community.

① training programs

ADRC has held a yearly disaster management seminar with support of JICA since the fiscal year 2000. "Disaster Management Seminar" aims to learn Japan's disaster management system to improve their disaster management capabilities, to identify problems and challenges in the disaster management practice in their countries, and devise solutions to them, draft an action plan for improvement. Participants are 13 governmental officials from 11 countries (Benin, China, Costa Rica, Guatemala, Honduras, India, Malaysia, Panama, Syria, Tanzania and Turkey). Its program was as follows:

To study the Japanese disaster management system comprehensively, the seminar program consists of the following modules:

Report on disaster measures of each country and exchange opinions

At the beginning of the seminar, the trainees present their "Country Reports" on disaster management in their countries.

Disaster management of the Japanese central government

Topics; Disaster Management at the National Government Level and International Cooperation (Cabinet Office), Emergency Relief Disaster Information System (Cabinet Office), Emergency Rescue and Relief (Fire and Disaster Management Agency), Tachikawa Disaster Prevention Base (Substitute Facility of the Government

³ With the support of the Japanese Government, DRI was founded by Hyogo Prefecture in April 2002 and the Hyogo Earthquake Memorial 21st Century

Research institute oversees its management. ... DRI aims at cultivating a disaster culture, mitigating social vulnerability, and developing policies for disaster reduction. ... Six functions of the DRI are museum exhibits, collection and preservation of source documents and materials, training of disaster management practitioners, exchange and networking, headquarters assistance in disaster response, action research on disaster reduction & development of disaster reduction professionals.

Headquarters for Disaster Response), etc.

Disaster management of local governments including measures taken during Hanshin-Awaji Earthquake

Topics; Great Hanshin Awaji Earthquake 1995, Nojima Fault Preservation Museum, Disaster Management of Hyogo Prefecture, etc.

Role of the private sector in disaster management

Topics; Disaster Management for Lifeline (Osaka Gas), Introduction to Risk Management & Insurance for Natural Disasters (Tokyo Marine Risk Consulting Co., Ltd.), etc.

Disaster reduction international cooperation

Topics; Related Disasters (Case Study: Sabo Works in Hyogo Pref. (Sabo=sediment control)), Flood Countermeasures (Case Study: Comprehensive Flood Control Countermeasures in Neya River)



Picture 26 Tachikawa Disaster Management Base
(the trainees visited three sites, Tachikawa Disaster Management Headquarters, the Hyper Rescue Team Base and the National Disaster Medical Center)



Picture 27 Osaka Gas Company

4. Disaster Education in Fiji, Indonesia, and Uzbekistan

Bishnu Hari Pandey
United Nations Centre for Regional Development (UNCRD)

(1) Introduction

This study aims to look into the details in regards to disaster related contents in formal education curriculum in primary and secondary education system in the three countries of Asia-pacific, namely: The Fiji Islands, Indonesia, and Uzbekistan. This study was conducted in association with the Decade for Education and Sustainable Development designated by UNESCO and the 2006-2007 Campaign "Disaster risk reduction begins at school," by the UN ISDR Secretariat and School Earthquake Safety Initiative (SESI) of United Nations Centre for Regional Development (UNCRD).

The countries of studies are currently carrying out school earthquake safety program with UNCRD under its regional project "Reducing vulnerability of school children to earthquakes". The UNCRD project has comprehensive program of school building safety, capacity building to apply earthquake resistant technology and disaster education through trainings of teachers and students. Many of the observation and findings in this report are drawn from the UNCRD project implementation process. In vice versa, the findings and recommendation of this study will provide basic information and guidance to the project.

Study objectives

The objectives of this study are to collect information on disaster education in school system (primary and secondary) in the Fiji Islands, Indonesia, and Uzbekistan and to analyze the situation to find gaps and opportunities in relation to integration of DRR education into current school education curricula. It also explores the way and approach to intervene for better disaster education system in these countries based on the analysis and other countries experiences.

Specifically, the study surveys and analyzes followings:

- ① Current school curriculum system
- ② Natural hazard and disaster related content in formal curricula over the primary and secondary education grades
- ③ Examples in DRR education from other coun-

- tries that are adaptable in study countries
- ④ Existing gaps, limitation and opportunities in integrating DRR in curriculum
- ⑤ Future direction for disaster education

Report overview

The report consists primarily of 3 parts, firstly the survey of disaster education status in case studies countries, secondly model cases from other countries which have been successfully implemented, and lastly analysis of gaps and opportunities for disaster education in those case study countries. The second chapter describes the methodology and process of the survey study. The third chapter focuses on findings of the field survey in those countries and the desk study of some model cases. The last chapter on gaps, opportunities and future action is basically critical analysis and suggested actions coming from it.

(2) Methodology

The study was carried out basically in form of interactions with teachers, curriculum experts of ministry of education and disaster professionals. Data on curriculum was collected in department of education and school curriculum and also at school level where texts are being adopted at local level. Interviews of officials at policy level are taken to understand the future prospects and direction for DRR integration.

1) Survey in study countries

In the Fiji Islands, National Disaster Management Office (NDMO), GRIPS, and UNCRD organized a one-day workshop on "disaster education and school safety" on 28th February in Suva in association with Ministry of Education and others. The workshop provided a platform for international and national experts and government agencies for sharing the experiences on disaster education as effective tools for disaster reduction measures in Fiji and to work out on appropriate strategies for development of effective policies, plans

and programs in relation to comprehensive disaster risk management training, education and awareness. Experts from Fiji, Japan, UN agencies, and government officers attended the workshop meetings. There was one separate session of DRR in school education to discussion explicitly on status, problems and future possibility of DRR integration.

The agenda of the round table session on disaster education was:

- Do curricula for primary and secondary schools contain information and knowledge on disaster risk?
- From which level?
- In which subjects?
- What content?
- Is the information explanatory enough? Or just presented as facts or instructions to accept?
- Any creative real field exercises incorporated?
- What should be the approach and strategy for effective inclusion of hazard and disaster risks in curricula?
- Should it be self contained in each level (forms)? Or should it be piece-wise in successive forms?
- Do lower primary level students too need basic and essential information on preparedness and do's and don'ts?
- What is the prospective to utilize extra-curricula activities in schools for this purpose?
- Quiz, poem, painting, drama competitions, building-for-big-one exercises, school and community watching, drill exercise, students safety club in schools

Apart from the input in the workshop, several rounds of discussion meetings were held with department of curricula section of Ministry of education in Suva. The officers provided framework of curriculum system and details of the disaster related content in existing textbooks from Grade I to Grade XI.

In Indonesia, information was collected from national department of education (DIKNAS), curriculum unit, which is responsible to develop and issue basic standard competency for primary and secondary schools all over the country. The DIKNAS expert team provided standard and basic competency matrix currently in place. It is learned that textbooks are developed in market based on the competency level set by DIKNAS and it's jurisdiction of individual to adopt any textbooks provided that they fulfill those competency. Some surveys were done at schools in Bandung to look into the local text books those are adopted in public primary schools.

In Uzbekistan, Department of Curriculum for primary and secondary school under Ministry of educa-

tion is responsible for developing the curriculum standards. In addition, Ministry of Emergency Situation develops training material on disaster preparedness for teachers to impart skills in emergency response. Interviews were made with Ministry of Education officials and disaster professionals working in Uzbekistan for the purpose of this study.

2) Reference desk study of other model cases

A selected literature survey was made in relation to DDR education to establish comparisons and possible adaptation of good practice in study countries. The desk study has limitation of language as only publicly available documents in English are used for comparisons and reference.

3) Analysis of the cases

Analysis is made to check the content against following parameters of disaster risk reduction phases:

- Understanding of basic science of natural hazards
- Geography in relation to location, prevailing hazard, interaction between natural environment and social system
- Historical accounts of disasters in the country and region
- Basic science of disaster prevention and mitigation
- Safety preparedness and emergency procedures including personal and collective safety
- Governance, civic studies and social system in relation to disaster risk management phases - building safety and codes, early warning system, government and citizens' role in pre-and post disaster situation, disaster and development etc.

Gaps are identified and opportunities for better education system are proposed in the context of mainstreaming disaster into development and daily life activities.

(3) Findings

1) Fiji

A recent government education plan named "Building a Strategic Direction for Education in Fiji" puts the vision as "Educating the Child holistically for a peaceful and prosperous Fiji". The document emphasizes to improve the education system to fulfill needs of Fiji on holistic approach for providing environment conducive to survival, growth and development.

"Education's response to the current social and political challenges ought to be in the form of a curriculum that will provide the necessary learning experiences for every child. The determination of such a curriculum constitutes

what is probably the biggest issue or challenge for education today. It calls for a holistic approach to child development in which teachers, parents and the community at large work together in the provision of an educational environment that is conducive to survival, growth and development. Such a view must take into account a child's physical, emotional, mental, social and cultural development. This is consistent with Article 29 of the Convention on the Rights of the Child (CRC), which states that education should assist a child in developing his or her personality, talents and mental and physical abilities to their fullest potential".

Though broad in conceptual form, it provides a form basis to include subject area of disasters, which are part of country, and safety from them for sustainable future of communities and individuals.

The education system of Fiji adopts primary school from class 1 to class 6 and secondary education from form 1 to form 6. It is noted that there is no systematic approach to introduce disaster education in both primary and secondary education. Curriculum officers and experts in the Ministry of Education acknowledge that there is no thought of comprehensive disaster risk management while developing current school curriculum and text books. However, disaster related content can be found sporadic from class 4 to form 6 under subject area of health science, social studies, basic science and geography. The table1 provides summary of the text book content in school curriculum in Fiji.

In primary schools, there is a basic life safety educa-

tion to children on the most frequent disaster, or flood, under health science. Brief accounts of natural disasters are given in social science of class 6 with hazard types and their effects for earthquakes, hurricanes, floods and landslides. However, there is no explanation of science behind these phenomena. Only the wind force scale is introduced in class 5 elementary science course that may related to the science part (Figure 1).

Later in class 7 and 8 (form 1 and form 2), the basic emergency response measures are prescribed for cyclones, floods, earthquakes and fires. In the same class, a chapter is devoted for thunderstorm and cyclones in basic science subject with relationship between air pressure and temperature, mechanism of rainfall, and wind speed. There is separate section relating to gale, storm, and cyclone warning in terms of wind speed. Also the classification of cyclones based on damageability is introduced there (see Figure 2 and Figure 3).

There is almost no further knowledge related to disaster and safety in form 3, 4 and form 5. At form 6 or grade X, a chapter on natural hazards is introduced in geography subject. The chapter describes briefly on types of hazard and their effects in general, the problems posed by these hazards to the basic need and other regular need generic remedy measures.

The Ministry of Education has developed teacher's prescription for implementing the curricula in primary and secondary classes. The prescription describes the concepts to be understood, expected attitudinal result

Table 1 Disaster education content in Fijian primary and secondary school curriculum

Subject	Levels	Content
<u>Health Science</u>	Class4 ,5	Water Safety Crossing flooded river
	Class 7	What to do in emergencies?
	Class 8	·Cyclones ·Flood ·Earthquake ·Fire
<u>Social Studies</u>	Class 6	Natural Disasters Types and their effects, [hurricane ,flooding ,landslides earthquake]
<u>Elementary Science</u>	Class 5	Wind speed using Beaufort scale
<u>Basic Science</u>	Class 8	Thunderstorms and Tropical cyclones ·Cyclones in term of temp ,air pressure ,wind speed and rainfall ·Relating gale, storm and cyclone warning to wind speed. ·Types of cyclones in terms of the damage they cause.
<u>Geography</u>	Class 12	Natural Hazards ·Types and their effects ·Constraints they create ·Preventative measures

and skill development in students after the section or the chapter is taught in each grade. In health science subjects in class from class 4 to class 8, emphasis is given to develop necessary skill in disaster and other accidental emergency situations.

Table 2 presents a comprehensive overview of the disaster related teaching topics and expected concepts, attitudes and skills for students as guidance to teachers.

During the survey, it was learned that there were efforts to incorporate disaster education in school sys-

tem in early 80's by the Fijian Red Cross Society. The lesson plans and teaching aids were developed for most of the disasters including earthquakes, fires and cyclones. However, there were no sustained efforts and further follow ups in making comprehensive disaster safety as an integral part of school education. Figure 4 and Figure 5 show the examples of Red Cross publication in 1981 now archived in prevention consortium website (http://www.proventionconsortium.org/themes/default/pdfs/CRA/DP_lessons_Fiji.pdf).

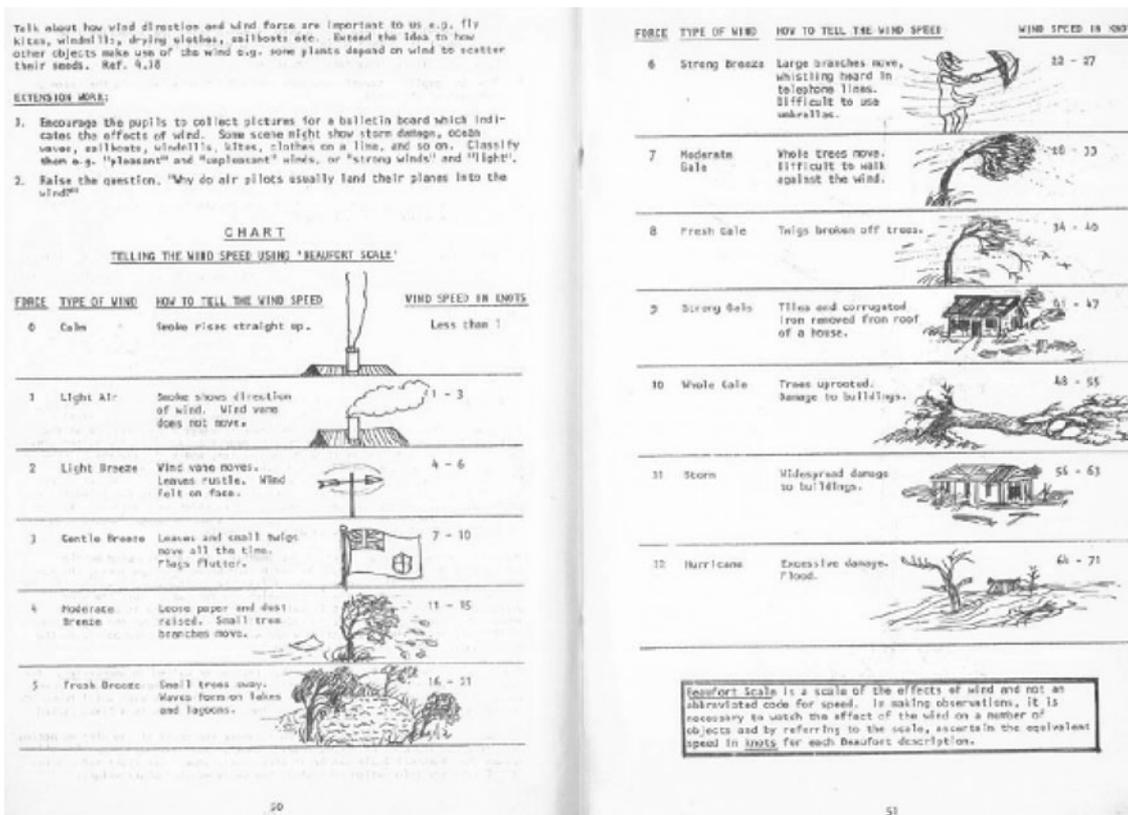


Figure 1 Snapshot of weather related chapter of elementary science at class 5 in Fijian text book.



Figure 2 Snapshot of safety and first aid chapter in health science of class 7 and 8 in Fijian text book.

Table 2 Teacher's prescription for disaster related subject matters in primary and secondary education in Fiji

Subject	Level	Content	Concept	Attitude	Skill
Health Science	Class 4	Water Safety: How to behave in and near water	The rules to follow when - traveling in boats and rafts - crossing a flooded river/drain - swimming - going on a picnic	- an appreciation of the need to follow water safety rules	- know how to be safety in water - learn to swim - be good passengers and behave appropriately while traveling in rafts/boats
Health Science	Class 5	Water Safety:	The rules to follow when - traveling in boats and rafts - swimming - crossing a flooded river	- an awareness of the need to follow water safety rules	- discuss all aspects of safety while traveling by water - be good passengers and behave appropriately while traveling in rafts and boats
Health Science	Class 7 / Form 1	Cyclones	- the steps to take before, during and after a cyclone	- an awareness for the need to act safely before, during and after a cyclone	- describe precisely the steps to be taken before, during and after cyclone - make homes safe from cyclones - plan and take proper actions during a cyclone
		Flood	- the steps to take before, during and after a flood	- an appreciation of the need for proper planning and action before, during and after a flood	- explain clearly what is to be done before, during and after a flood - plan and take proper actions during a flood as to be safe
Health Science	Class 8 / Form 2	Earthquake	- safety during and after an earthquake	- an awareness of the steps to be taken during and after an earthquake	- describe the steps to be taken during and after an earthquake - act safely during and after an earthquake
		Fire	- preventing fires - safety during and after a fire	- an appreciation for the need to prevent fires and to act safety during and after a fire	- explain some causes of fire and how they may be prevented - state the safety procedures during and after a fire - act safely during and after a fire
Social Studies	Class 6	Weather	- climatic factors - natural disasters	- an appreciation of climatic factors - an concern for the effects of natural disasters	- read a weather map - explain how the weather affects their environment - name and describe different types of natural disasters
Basic Science	Class 8 / Form 2	Thunderstorms and Tropical Cyclones	- the conditions that lead to the formation of lightning - tropical cyclones in term of temperature, air pressure, wind speed and rainfall - how to relate gale, storm and cyclone warnings to wind speed - cyclones by listing the types of damage that	- become aware of the need to know the hurricane season months - appreciate the need to take precautions before, during and after cyclones - show a greater appreciation and understanding of weather news item	- identify the three types of lightning - locate the eye of the cyclone on weather maps - identify the path of the cyclone from weather maps - interpret the readings on the Beaufort Scales.
Geography	Form 6	The emphasis in this theme should be on the nature of the different kinds of natural hazards and their causes and the problems and constraints they create. A consideration should be made of the preventive measures that can be taken. Constraints of a natural hazard on the economy should also be covered. Some Suggested Objectives: After this theme has been taught students should be able to:			
		a) understand the meaning of the term "natural hazards" b) examine the nature of different types of natural hazards c) know the factors which cause natural hazards. d) examine the consequences of natural hazards e) assess man's response to the aftermath of a natural hazard			

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Figure 3 Snapshot of table of content of weather unit of basic science subject of class 8 in Fijian text book.

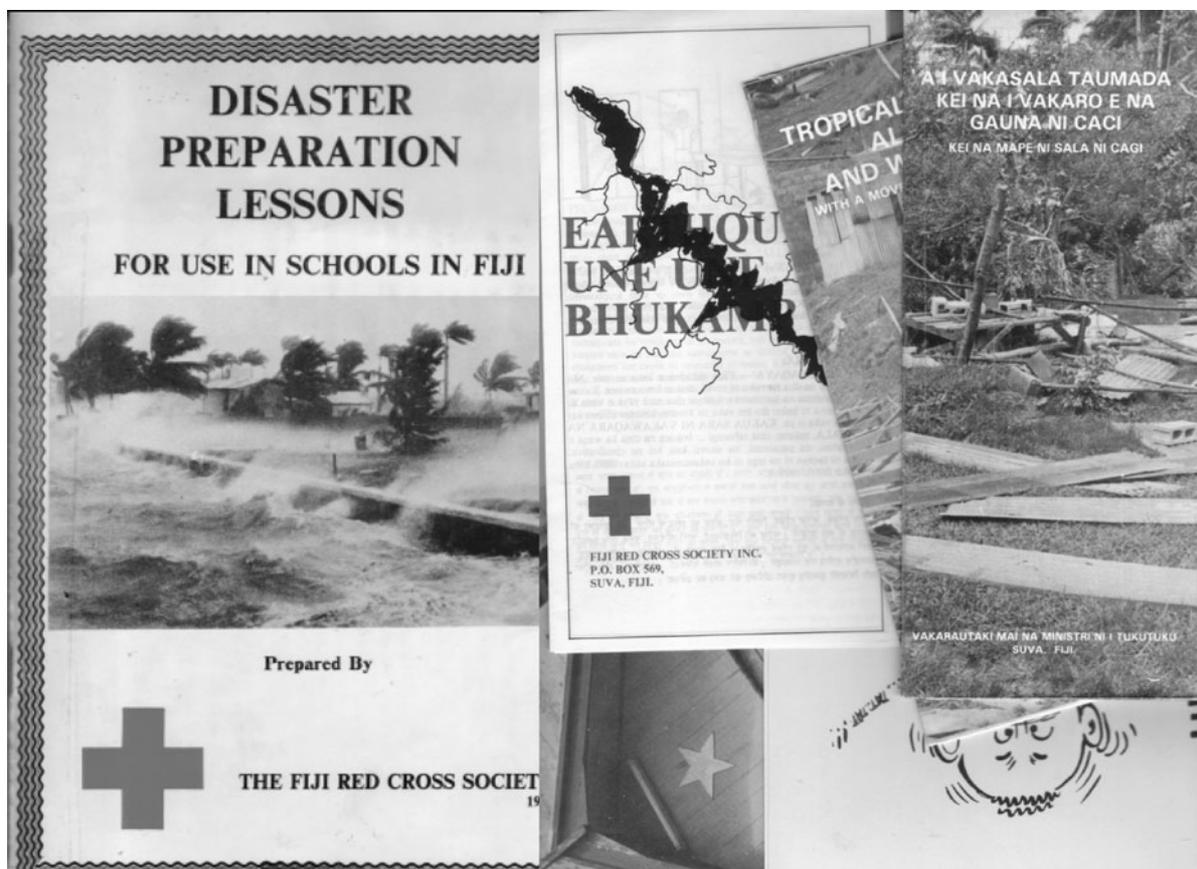


Figure 4 and 5 Disaster preparedness lesson plan for Fijian schools developed by Fiji Red Cross in 1981

2) Indonesia

Indonesia is one of the most hazard prone countries in the world in terms of tectonic activity. The world's largest archipelago, it is situated on a major tectonic fault line which produces frequent natural disasters including earthquakes, volcanoes, tsunamis and also it faces frequent mudslides, landslides and flooding. These disasters have a major effect on the population as thousands of people are killed and displaced every year, and have a huge social and economic effect on the country. Recent big scale earthquake and tsunami disasters and also mudslide and floods remind that the country has to live with these natural phenomena. Only long term investment in education which effectively addresses the need of adopting necessary culture of disaster prevention and mitigation can reduce the avoidable loss of lives and properties from these recurrent hazards. Integrating DRR into the curriculum is the most effective tool for this.

Sekolah Dasar (SD) (literally Elementary School) is basically primary school for children of age 6-12. This level of education is compulsory for all Indonesian citizens, based on the national constitution. The SD level education is compulsory and all students have to study for six years to pass this level. Middle School, generally known by the abbreviation "SMP" (Sekolah Menengah Pertama) is for three years from the age of 13-15. After three years of schooling and graduation, students may move on to High School or College.

In Indonesia, there is a recent change in curriculum system of primary and middle schools. National Education Minister's Regulation No 22/2006 on education content standard introduced the Education Unit Curriculum (KTSP) in Indonesia in 2006. This curriculum gives wider autonomy for each school to develop or adopt their own textbooks by taking into account the potentials of schools and the surrounding region (<http://www.sampoernafoundation.org>). The new curriculum was operationally established and implemented by each education entity, where the guidelines and evaluation standards are still being developed and issued by the national Department of Education (DOE). As per the new system, the text books are very much school-oriented, and there will be a national level exam to check the competencies set by DOE. The DOE issues KTSP that contains competency standard and basic competency. Competency standard is overall knowledge level and basic competency is more detailed description with specific contents.

Subjects in primary, intermediate and higher secondary schools with disaster content

The formal education curriculum at school levels in Indonesia have subjects that can be basically grouped

into 5 themes:

- Religion and culture
- Language and arts
- Social studies
- Science, technology
- Health and physical education

The numbers of subject courses are few in primary school education with increasing number in intermediate and higher secondary level. The disaster related content is limited in subjects of social studies, science and physical education regardless of the level. Comparatively, higher concentration of the disaster content can be found in health and physical education subjects. The disaster related content is more prevalent in primary and intermediate school level than that in higher secondary schools. As some chapters are devoted in hazard science in primary and intermediate science subjects, no material in hazard or disaster theme is provided in science related subjects at higher secondary level.

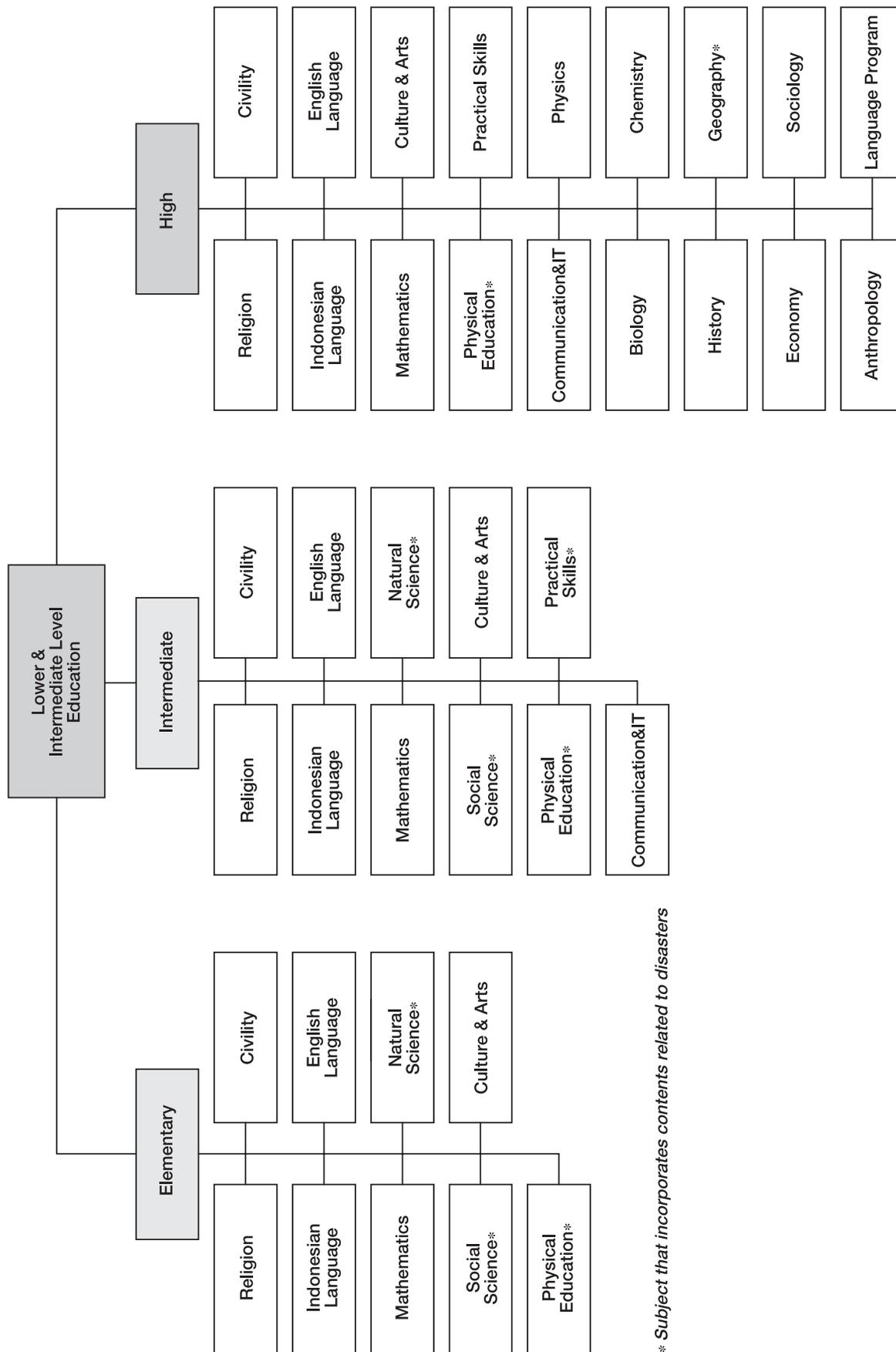
Basic competency and standard competency for all subjects at primary, intermediate and higher secondary level set by curriculum section of national department of education have been surveyed with a team of expert in the department. The survey result of the disaster curriculum is summarized in Table 3.

Table 4 provides detailed content of basic competency at primary education level in Indonesian curriculum. Table 5 provides detailed content of basic competency at intermediate school education level in Indonesian curriculum. Table 6 provides detailed content of basic competency at higher secondary school education level in Indonesian curriculum.

Disaster and safety related content in physical education and health subjects

In Indonesian school education, the subject area of physical education and health (PEH), in comparison to other subject areas, includes the largest number of sub-sections and units related to disasters and safety. In class 1-3, basic competency has requirement of students to be able to practice safe and hygienic daily life like sanitation, traffic safety, safety from physical surroundings. In upper elementary grades 4-6, students are expected to be able to observe safe outdoor activities like camping under natural conditions. In middle school grade 7-9, more specific subjects are provisioned to make students able for first aid, practice in preservation of healthy environment, learning value of mutual help, cooperation and support in need. In upper secondary grades, skills for mountaineering and rescue and broader level understanding of social system for mutual help and support, humanitarian ethics are asked for. Table 7 presents relevant standard and basic competency in PEH in primary and secondary school.

Table 3 Lower & Intermediate level education subject map in Indonesia



* Subject that incorporates contents related to disasters

Table 4 Disaster education content at primary school in Indonesia

Grade	Subject	Standard and Basic Competence Concerning Disaster Management
I	Natural Science	Recognise various astral objects and natural phenomenon (weather and season) as well as its effects on human activities (2nd semester) <ul style="list-style-type: none"> Identify various astral objects through observation Identify the surrounding weather conditions Distinguish the effects dry and rainy season have on human activities
	Social Science	Describe the surroundings of the house (2nd semester) <ul style="list-style-type: none"> Describe the position of the house
II	Natural Science	Understanding natural phenomenon and the effect of the sun in daily life (2nd semester) <ul style="list-style-type: none"> Identify the position of the sun in the morning, noon, and afternoon Describe the use of solar heat in daily life
	Social Science	Understanding the position and role of members in the family and in the neighbourhood (2nd semester) <ul style="list-style-type: none"> Provide examples of forms of cooperation in the neighbourhood
III	Natural Science	Understanding the surface of the earth, weather, and its effects on human, as well as its connection with the way man preserve nature (2nd semester) <ul style="list-style-type: none"> Describe the surface of the earth in the surrounding terrain Explain the relation between cloud conditions and the weather Describe the effect of weather on human activities Identify the way man preserve nature in the surrounding environment
	Social Science	Understanding the surrounding environment and practice cooperative activities around the house and school (1st semester) <ul style="list-style-type: none"> Talk about the natural and artificial environment in the surroundings of the house and the school Preserve the natural and artificial environment around the house Draw a map of the area of the house and school Conduct co-operative activities around the house, school, and village
IV	Natural Science	Understanding the change of physical environment and its effects on land terrain (2nd semester) <ul style="list-style-type: none"> Describe various changes of physical environment (wind, rain, sunshine, and sea waves) Describe the effects of the changes physical environment have upon land terrain (erosion, abrasion, flood, and landslide) Describe methods of preventing environmental destruction (erosion, abrasion, flood, and landslide)
	Social Science	Understanding history, natural phenomenon, and racial diversity in the district/municipal and provincial level (1st semester) <ul style="list-style-type: none"> Reading a map of the surrounding area (district/municipality and province) on a simple scale Describe the natural phenomenon and appearance in the district/municipality and province along with its relation to the social and cultural diversity
V	Natural Science	Understanding the changes happening in nature and its connection with the use of natural resources (2nd semester) <ul style="list-style-type: none"> Identify natural phenomenon occurring in Indonesia and its impact on living creatures and the environment Identify various human activities that could alter the earth surface (agriculture, urbanisation)
	Social Science	Respect various national historical figure and artefacts in the Hindu-Buddha and Islam period, diversity of nature and race, and economic activities in Indonesia (1st semester) <ul style="list-style-type: none"> Recognise the diversity of natural and artificial appearance as well as the time zone distribution in Indonesia by using map/atlas/globe and other media
VI	Social Science	Understanding the development of the Indonesian region, natural appearance, and social conditions of countries in South East Asia as well as continents (1ST semester) <ul style="list-style-type: none"> Compare natural appearances and social conditions of neighboring countries Identify continents
		Understanding natural phenomenon occurring in Indonesia and its surrounding area (2nd semester) <ul style="list-style-type: none"> Describe natural phenomenon occurring in Indonesia and its surrounding area Recognise measures taken in the event of a natural disaster
	Subject not include DR	Religion, Civility, Indonesian, English, Mathematics, Culture & Arts, Physical Education

Table 5 Disaster education content at intermediate school in Indonesia

Grade	Subject	Standard and Basic Competence Concerning Disaster Management
VII	Natural Science	<p>Understanding natural phenomenon through observation (2nd semester)</p> <ul style="list-style-type: none"> Conduct systematic and planned object observation to obtain information on biotic and a biotic natural phenomenon Apply safety procedures when conducting observation of natural phenomenon <p>Understanding the mutual dependency of the ecosystem</p> <ul style="list-style-type: none"> Apply the role of man in the management of the environment in order to minimise pollution and damage to the environment
	Social Science	<p>Understanding the environment of human life (1st semester)</p> <ul style="list-style-type: none"> Describe the various formation of the earth surface, formation process, and its impact on life <p>Understanding human efforts to understand the development of its environment (2nd semester)</p> <ul style="list-style-type: none"> Learning to use the map, atlas, and globe to obtain spatial information Drawing sketches and map of regions portraying geographical objects Describe phenomenon occurring in the atmosphere and hydrosphere, as well as its impact on life
		Practical Skills
VIII	Social Science	<p>Understanding social issues related to the growth of human population (1st semester)</p> <ul style="list-style-type: none"> Describe issues and problems of environment and efforts in overcoming them in the frame of sustainable development
	Practical Skills	<p>Appreciate the engineering work of water purifying technology (1ST semester)</p> <ul style="list-style-type: none"> Understanding mechanical technology based water purifying equipment Appreciate the technical skill in assembling mechanical technology based water purifying equipment Implementing water purifying technology Planning work procedure of the assembling of mechanical technology based water purifying equipment Assembling mechanical technology based water purifying equipment <p>Appreciate engineering technology (2nd semester)</p> <ul style="list-style-type: none"> Understanding chemical technology based water purifying equipment Appreciate technical skill in assembling chemical technology based water purifying equipment Assembling water purifying equipment Planning work procedure of the assembling of chemical technology based water purifying equipment Assembling chemical technology based water purifying equipment
IX	Natural Science	<p>Understanding the solar system and its processes (2nd semester)</p> <ul style="list-style-type: none"> Explain the relation between processes occurring in the lithosphere and atmosphere layer with health and environmental problems
	Social Science	<p>Understanding the relation between man and earth (2nd semester)</p> <ul style="list-style-type: none"> Interpret map on the forms and patterns of the earth surface Describe the interrelation between geographical elements and people in the South East Asian region Describe the distribution of the earth surface into continents and oceans
	Physical Education	<p>Implement healthy way of life (1st semester)</p> <ul style="list-style-type: none"> Understanding various fire hazards Understanding methods to avoid fire hazards <p>Implement healthy way of life (2nd semester)</p> <ul style="list-style-type: none"> Understanding various dangers of natural disaster Understanding methods in dealing with various natural disaster
		Practical Skills
	Subject not include DR	Religion, Civility, Indonesian, English, Mathematics, Culture & Arts, Physical Education, Communication & IT

Table 6 Disaster education content at higher secondary school in Indonesia

Grade	Subject	Standard and Basic Competence Concerning Disaster Management
IX	Physical Education	<p>Practice in planning outdoor exploration and rescue activities along with intrinsic values found in it (1st semester)</p> <ul style="list-style-type: none"> Practice basic skills in exploring the sea shore and values of responsibility, cooperation, tolerance, mutual help, and carrying out group decisions Practice basic skills in rescue activities in the sea shore and values of responsibility, cooperation, tolerance, mutual help, and carrying out group decisions
		<p>Practice various style of swimming skills and water rescue with intrinsic values found in it (2nd semester)</p> <ul style="list-style-type: none"> Practice combination of breast stroke style, free-style, and another style with values of discipline, hard work, courage, and responsibility Practice basic skills in water rescue with mouth-to-mouth resuscitation as well as values of discipline, hard work, courage, and responsibility <p>Practice in planning outdoor exploration and rescue activities along with intrinsic values found in it</p> <ul style="list-style-type: none"> Practice basic skills in exploring the mountains and values of responsibility, cooperation, tolerance, mutual help, and carrying out group decisions Practice basic skills in rescue activities in the mountains and values of responsibility, cooperation, tolerance, mutual help, and carrying out group decisions
X	Geography	<p>Article I. Analyse elements found in the geosphere (2nd semester)</p> <ul style="list-style-type: none"> Analyse the dynamics and tendencies of lithosphere and pedosphere changes and its impact towards life on earth Analyse the atmosphere and its impact towards life on earth Analyse the hydrosphere and its impact towards life on earth
XI	Physical Education	<p>Practice basic water rescue skills and intrinsic values found in it (2nd semester)</p> <ul style="list-style-type: none"> Practice combination of swimming styles with values of discipline, cooperation, and courage Practice basic skills in water rescue with mouth-to-mouth resuscitation as well as values of discipline and responsibility <p>Practice in planning outdoor exploration and rescue activities along with intrinsic values found in it</p> <ul style="list-style-type: none"> Practice basic skills in rescue activities in the mountains and values of discipline, responsibility, and safety
XII	Subject not include DR	Religion, Civility, Indonesian, English, Mathematics, Culture & Arts, Physical Education, Communication & IT, Physics, Biology, Chemistry, History, Economy, Sociology, Anthropology, Foreign Language Prog.

Table 7 PEH standard and basic competency in relation to disaster

Grade I Recognition of school surroundings (school ground) through physical activities	11.1 Recognition of school surroundings (school ground) as a group, and the values of disciplines, cooperation, and clean environment 11.2 Practice various enjoyable physical activities in the school grounds, and the values of disciplines, cooperation, and healthy way of life.
Grade II – do–	10.1 Practice various physical activities in the school grounds, and the values of sanitation, hygiene, and safety 10.2 Follow the traffic signs around the school grounds as a group and be aware of safety, cooperation, and disciplinary factors.
Grade III Make the most of the school surroundings for physical activities	11.1 Practice locomotive movements in path tracing and values of discipline, cooperation, be aware of safety factor 11.2 Choose a safe playground in and around the school grounds 11.3 Practice awareness of self-safety and the safety of others while conducting activities in and around the school grounds, and sanitary values
Grade IV Practice camp in the school ground	11.1 Practice variety of proper skills needed in camping activity, along with values of cooperation, responsibility, discipline, and rule compliance 11.2 Practice challenging physical activities during camp 11.3 Practice healthy way of life
Grade V Practice exploration the school ground	11.1 Practice plan-making of the exploration 11.2 Practice various movement skills during the exploration of the school ground, as well as values of cooperation, discipline, safety, sanitary, and ethics
Grade VI Practice exploration and camping in natural environment	11.1 Practice simple exploration activities outdoors (outside of school in a natural environment), as well as values of cooperation, responsibility, discipline, and safety 11.2 Practice to make tent together, as well as values of cooperation, responsibility, discipline, and safety
Grade VII Practice camp and basic safety procedures in and around the school ground	6.1 Choose a proper space to make tent, practice basic techniques of making tent in the school ground as a group, as well as values of cooperation, responsibility, and affinity 6.2 Practice safety procedure and first aid to light injury as well as values of cooperation, responsibility and affinity
Grade XI Practice camp and basic safety procedures in natural environment (outdoors)	13.1 Practice basic skills in mountaineering as well as values of responsibility, cooperation, tolerance, mutual help, and decision making in a group 13.2 Practice basic skills in mountain exploration rescue as well as values of responsibility, cooperation, tolerance, mutual help, and decision making in a group 13.3 Practice skills in preservation of a healthy environment
Grade XII Practice planning and exploration skills, and rescue in natural environment	12.1 Practice skills in planning exploration on valleys 12.2 Practice basic skills in rescue of exploration on valleys as well as values of disciplines, responsibility and safety

Disaster related content in social studies curriculum

In social studies subject (IPS) of primary education, there is requirement for a small description about common disaster types in and around Indonesia. Basic competency for grade 6 mentions explicitly how to face with disasters. In middle school, human interaction with natural environment is to be explained, though there is no direct reference to disaster and risk. Following are the basic competency in various grades for social studies subject.

Grade VI

- To describe natural phenomena in Indonesia and our neighboring countries
- To know how to face natural disasters

Grade VII

- To describe the phenomenon that happens in atmosphere and hydrosphere and the impact to the lives

Grade VIII

- To describe the problem of population and the impact to the development)

Grade IX

- To describe the interrelation ship between the geography and population in south east Asia region
- To describe the continental groups of earth land mass and ocean

Disaster Science in curriculum

In science curriculum, there is no systematic knowledge and information in relation to mechanism of natural hazard. Being a disaster hot spot country, Indonesia faces multiple hazards and students are ideally supposed to have fundamental knowledge how and why it hap-

pens. However, there is no scientific reference and knowledge towards this in current school curricula. Science related to earth system and hydro metrology is limited to general account of natural phenomena and no specific details of the hazard science. Table 8 presents the status of science education that is directly or indirectly related to disasters.

Localized curriculum developed for small islands

After decentralized curriculum adopted in Indonesia, provincial and local agencies are also authorized to develop and implement location and site specific curricula. One of such curricula for small islands has accommodated more disaster related content. A course on sea and surrounding deal with basics of coastal hazards, remedy measures to protect coastal region from environmental pollution and whether related hazards. Table 9 presents some examples of disaster related subject matters basic competency guidance for teachers.

Localized school book text in Bandung

Two examples of the subject coverage are presented here as illustration on how basic competencies are realized in actual school text books. In grade 4 social science book, there is a lesson text and activity exercises related to different forms of hazards. Figure 6 presents some illustration and snapshots of pages of pupil's book.

In one another book adopted for Grade 8 as geography text book, a detailed description is made in plate tectonics, earthquake origin and measurement, plate boundaries and location of fault zone and effect of earthquakes. Figure 7 illustrates the snapshot view of one of the page describing earthquake phenomena.

Table 8 Science education basic competency in primary and middle school education

Class	Basic Competency
Grade I	<ul style="list-style-type: none"> ▪ To identify surrounding matters (Environment based on observation). ▪ Effect of climate with human activities.
Grade III	<ul style="list-style-type: none"> ▪ To describe the appearance of earth. ▪ To make co-relation between cloud and climate. ▪ To describe the effect of climate to human life. ▪ To identify how human keep sustain the environment.
Grade IV	<ul style="list-style-type: none"> ▪ To describe the relationship between living being and the environment.
Grade VII	<ul style="list-style-type: none"> ▪ To find natural phenomena. ▪ To identify the importance's of sustainable way of living. ▪ To protect the effect of Over population of human environment

Table 9 Disaster related matters in sea and surroundings subject with basic competency

Grade	Basic Competency	Remarks
Grade III	To damage the activity that can damage the environment.	Indicator- To recognize the kind of beach (sandy, stony, mud)
Grade IV	To explain the correlation between mangrove ecosystem, lagoon, and, coral reef.	The correlation mangrove ecosystem, lagoon, and coral reef
Grade VI	To expression the problem with the problem tree. To explain how nature processes in beach can make a disaster To describe the effort to decrease the victim of natural disaster To explain disaster in the beach area. To explain the earthquake and tsunami. To explain how to decrease the effect of earthquake and tsunami To explain the efforts to decrease the community involvement on the managing beach area and sea .	

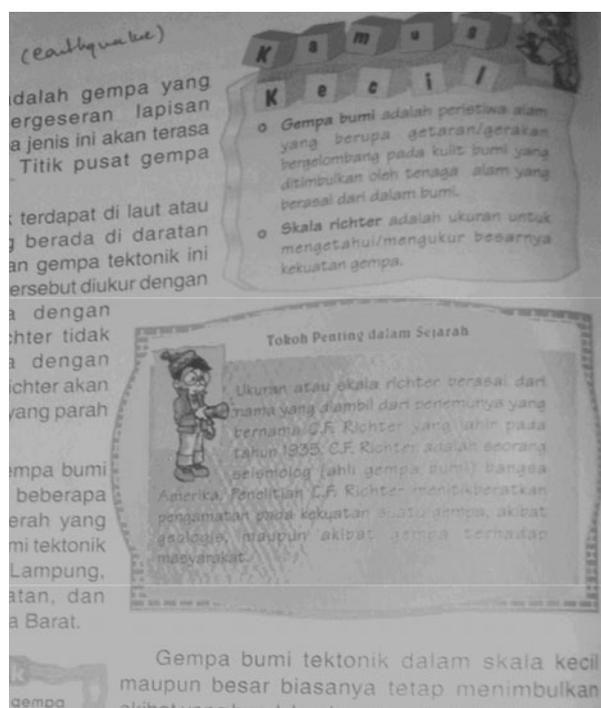


Figure 6 Snapshot of Grade 4 book on social studies adopted in one of the Bandung city school, which explains the earthquakes, volcanoes, and floods and simple precautionary measures

3) Uzbekistan

There are no explicit subjects, concerning disaster education in schools of Republic of Uzbekistan. According to the curriculum for national education, which is authorized by the Ministry of Education, 6 hours of additional after-hour-lesson are stipulated on basics of safety of life in each grade. Besides, these hours are shared between various disciplines, for example, physical culture, geography, and biology. It is observed that there are no text books for students for the after-hour lessons, but only teacher's guidelines as

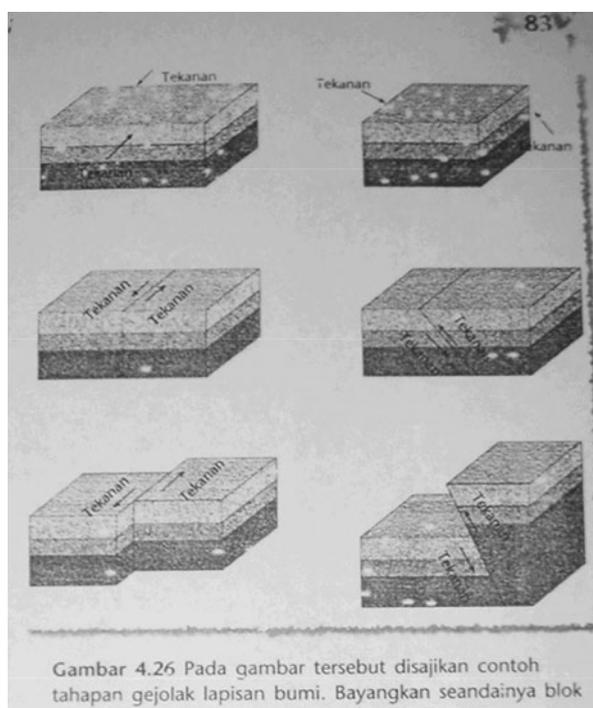


Figure 7 snapshot of grade 8 geography book adopted in one school in Bandung

to what kinds of activities are to run. The problem is complicated with the limited knowledge of teachers on the related field.

Disaster Education in Primary Classes (Grade 1- Grade 4)

For children of 1-2 classes there are no manuals, both for schoolchildren and for teachers. In textbooks for initial classes of schools on studying world, there are no materials related to natural disasters. In methodical manual for class 3 and class 4 intended for teachers, a concept of emergency situation is given within the

framework of the special program, which according to authors arises due to earthquakes, floods, mudflows, snow avalanches, strong winds, etc. In the chapter "Is there any opportunity of rescue in case of EMERGENCY?," a few description is made for major disasters including earthquakes. It is written that due to earthquake people can lose their houses and can die and if they will learn rules of behavior during acts of nature, they can save their own and others' life and reduce the consequences of natural disasters. In the manual, which is rich in arts activity including poetry and other forms of interactive learning session (questions and answers) attention has not been given to training of schoolchildren and teachers to skills of action in disasters and to other stages of preparation to emergency. Except this teacher's manual, there is no content, directly or indirectly, on the disasters and safety from them.

Secondary classes (5-9)

Basic knowledge about natural disasters is provided in this stage in school curriculum. Under the text book of "Physical Geography" for grade 5, preliminary information on various natural phenomena is provided. The mechanisms of natural hazards are described in text book body. For instance, under the theme of "Movements of the earth's crust" detail is given on reasons of occurrence of earthquakes, concepts of hypocenter, epicenter, intensity of motions, etc. Almost same information is repeated with a bit more information in regional context in the textbook "Geography of continents" for a 6-class of school in the theme "Lithosphere". Historical data on earthquakes in the Central Asia and in Uzbekistan are given in the textbook "Physical geography of the Central Asia and Uzbekistan" for 7 classes in the theme "Geological structure and a relief of the Central Asia".

With this much of information on the hazard risk, it is expected that students are well informed about the prevailing risk. However, the missing part of in the curricula is how to be prepared for such disasters and what to do during emergency situation arisen by those disasters. The basic risk mitigation and emergency life safety skill is lacking in the curriculum. Recent years, there have been several strong motions felt in Uzbekistan including those at school time when school students got panicked with no information and knowledge what to do in such situation. But unfortunately, no specific manuals and lessons at schools are available for students. There are few manuals developed by the Ministry of Education and Institute of Civil Protection intended only for teachers.

There is a methodical manual intended for teachers of grade 5-9 for carrying out of additional lessons on

bases of safety of life. Content of the given methodical manual is authorized by the order of Ministry of National Education (RUz) on January, 10, 2000. In the given manual, it included 16 topics on bases of safety of life and these topics are distributed by classes.

For grade 5, a theme on "Emergency related to failures of dwellings, emergency on transport, emergency of criminal character, rules of the first medical aid" are provided. In students books, the information is limited only to the rules of accident-free using municipal networks, rules of traffic, behavior in case of criminal situations, such as crime and initial concepts of first pre-medical aid. There is no reference to natural big scale emergencies like earthquakes and failure of function of infrastructures. Though there is hazard related information in the geography text book where description is available for large scale impact by natural forces, same is not touched under the life safety manual.

In the program of grade 6, themes on "Dangerous natural phenomena and processes," "Earthquakes," "First medical aid," and "the Basis of healthy life" are introduced in the methodical manual. Under section "Dangerous natural phenomena and processes" there is brief description on the reasons of acts of nature and about ways how to notify people in case of hazard occurrence. Under the student activity list, students are to be asked to list probable types of natural hazard in their neighborhoods. Teachers are asked to provide basic information of measurement of natural forces to students. For instance, under the theme of "Earthquake", definitions of concept of earthquake and the reason of its occurrence are to be given. Concepts about units of measurements of motions (Mercalli scale and MSK - 64) and their definition on impact on surrounding are given. Transitive values from Richter scale to MSK - 64 are given. Also values of probable seismic intensity in large cities and settlements of Republic are presented. In section "What it is necessary to make before earthquake" it is not mentioned construction of anti-seismic buildings and about rules of preservation of seismic stability and about an opportunity of reinforcement of existing buildings.

In the manual there is no illustrative material as an aid to teachers nor to urge teachers to prepare such illustration for students. Concepts about skills of life safety behavior are more superficial in nature. Positions (for example, the standard rules - to sit, cover, lean) are not specified in it. Also in the given methodical manuals are not considered actions of teachers and managements of school during earthquake, a rule of evacuation of pupils after strong shakings. In the manual, it is not written about probable behavior of schoolchildren at house and in the street during earthquakes and about

necessity of preparation for probable acts of nature for family.

In the program of 7 classes are included the themes of Landslides, Avalanches and mudflows, Hurricanes and typhoons, Floods, First medical aid, and Basis of healthy life. In the textbook "Physical geography of the Central Asia and Uzbekistan" for 7 classes, the themes of Geological structure and Relief of the Central Asia, Historical data on earthquakes in the Central Asia and in Uzbekistan are given. So it will be relevant to connect the themes with earthquake preparedness.

In the program of 8 classes are included the themes of Failures on manufacture, Fires and explosions, Failures with an output of strongly poisonous substances, First medical aid, and Basis of healthy life. Also it may be interesting to connect the themes with probable failures in case of earthquakes.

In the program of 9 classes are included the themes of Failures connected to distribution of radioactive substances, Hydro-dynamical disasters, Ecological balance disruption, and Basis of healthy way of life. It is known that in territory of the Central Asia there are a lot of places of radioactive waste products. Also in the Central Asia many water reservoirs with great volumes are constructed. Earthquakes may be initiators of accidents on such objects. But in programs of training course this connection is not discussed.

General review of the material

A review of existing curriculums and manuals on preparation to emergency at schools shows that possible natural disasters, the reasons of their occurrence and ways of reduction the consequences and risk are insufficiently described. The major deficiency is lack of a material on preparation. For example, there is no firm basis to have teaching outcome that leads to have skills to appropriate response and rescue of lives at probable disaster emergencies.

It is apparent that most of the content of hazards are concentrated in only the program of class 6. From the field survey where interaction was made with school teachers, it is learned that the subject matters which fall into additional lessons are not given priority and hence there is no capacity building program for teachers like continuing education in this subject themes. At the same time, for those additional classes, there is no text book or reference material for students to learn. Whatever students take from those additional class are not to have long term influence as there is no material for review and practices. In general, there is also lack of appropriate additional non-formal education material which can also enhance the knowledge and skill of the students through multimedia games, picture books, and cartoons.

As Institute of Civil Protection has recently started to revise manuals, it could provide a good opportunity to put disaster safety lessons in curricula.

(2) Selected model cases on integration of DRR into school curriculum

1) Master disaster prepared by American Red Cross

The American Red Cross has developed a curriculum named "Master disaster" that not only teaches students about disaster safety, but helps teachers meet their required objectives as well (<http://www.redcross.org/disaster/masters/intro.html>). The objective of Masters of Disaster curriculum is to help teachers integrate important disaster safety instruction into their regular core subjects such as language arts, math, science, and social studies. This is not additional material for teachers to work but it is a supplementary to the lessons teachers are already teaching. At the same time it provides students with information to help them prepare for disasters and stay safe during and after a disaster in their home, school, or community.

While strengthening students' core academic skills in science, math, social studies, and language arts (including reading, word comprehension, and spelling), the Master of Disaster curriculum educates them about hazards that cause injury, death, and damage. The materials are designed for flexibility, so that teaching teams can integrate hazard-related lessons into the core academic subjects. The curriculum focuses on:

- General disaster preparedness
- Hurricanes
- Floods
- Tornadoes
- Lightning
- Earthquakes

Figure 8 gives a simple example as to how master disaster curriculum guides to integrate disaster education in grade 6 into existing science course.

2) Ready kid by homeland security

The U.S. Department of Homeland Security has developed Ready Kids as a campaign in a commonsense framework designed to promote learning about emergency preparedness in school curriculum system (www.Ready.gov). Ready Kids is a family-friendly resource for teachers and parents to help facilitate discussions about emergency preparedness. Following is an example of how subjects are introduced to make children aware of emergency procedures as guide for teachers and parents under existing curricula.

SCIENCE 6-8

STRAND A: THE NATURE OF MATTER		
STANDARD	BENCHMARK	MASTERS OF DISASTER LESSON
Standard 1: The student understands that all matter has observable, measurable properties. (SC.A.1.3.)	1. Identifies various ways in which substances differ (e.g., mass, volume, shape, density, texture, and reaction to temperature and light).	Hurricanes, Lesson Plan 1, p. 26-27 Earthquakes, Lesson Plan 1, p. 127-129
	2. Understands the difference between weight and mass.	Hurricanes, Lesson Plan 1, p. 26-27
	3. Knows that temperature measures the average energy of motion of the particles that make up the substance.	
	4. Knows that atoms in solids are close together and do not move around easily; in liquids, atoms tend to move farther apart; in gas, atoms are quite far apart and move around freely.	Hurricanes, Lesson Plan 1, p. 26-27 Lightning, Lesson Plan 1, p. 104-105 Lightning, Lesson Plan 2, p. 108-109 Earthquakes, Lesson Plan 1, p. 126-129
	5. Knows the difference between a physical change in a substance (i.e., altering the shape, form, volume, or density) and a chemical change (i.e., producing new substances with different characteristics).	Hurricanes, Lesson Plan 1, p. 26-27 Earthquakes, Lesson Plan 1, p. 126-129
	6. Knows that equal volumes of different substances may have different masses.	Hurricanes, Lesson Plan 4, p. 40

Alignment of Masters of Disaster Curriculum

Science Grades 6 – 8

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Figure 8 Example of disaster education integration from "Master disaster" curriculum in Florida state

National Standards and Benchmarks		
		Lesson 1 Lesson 2 Lesson 3
LANGUAGE ARTS: Reading		
Uses the general skills and strategies of the reading process	Grades 3-5: Establishes and adjusts purposes for reading Grades 3-5: Reflects on what has been learned after reading and formulates ideas, opinions, and personal responses to texts	*
Uses reading skills and strategies to understand and interpret a variety of informational texts	Grades 3-5: Uses reading skills and strategies to understand a variety of informational texts Grades 3-5: Knows the defining characteristics of a variety of informational texts	*
LANGUAGE ARTS: Writing		
Uses the general skills and strategies of the writing process	Grades 3-5: Drafting and Revising: Uses strategies to draft and revise written work Grades 3-5: Uses strategies to write for a variety of purposes Grades 3-5: Writes expository compositions Grade 6: Drafting and Revising: Uses a variety of strategies to draft and revise written work Grade 6: Writes expository compositions	*
LANGUAGE ARTS: Listening and Speaking		
Uses listening and speaking strategies for different purposes	Grades 3-5: Contributes to group discussions Grades 3-5: Listens to classmates and adults Grades 3-5: Responds to questions and comments Grade 6: Asks questions to seek elaboration and clarification of ideas	*
SOCIAL STUDIES		
People, Places, and Environment	Middle Grades Elaborate mental maps of locales, regions, and the world that demonstrate understanding of relative location, direction, size, and shape Create, interpret, use, and distinguish various representations of the earth, such as maps, globes, and photographs Use appropriate resources, data sources, and geographic tools to generate, manipulate, and interpret information Describe physical system changes such as seasons, climate, and weather and the water cycle and identify geographic patterns associated with them.	*
Individual Development and Identity	Middle Grades Describe personal connections to place—as associated with community, nation, and world	*
GEOGRAPHY		
Understands the characteristics and uses of maps, globes, and other geographic tools and technologies	Grades 3-5: Knows the basic elements of maps and globes Grade 6: Uses thematic maps	*
Knows the location of places, geographic features, and patterns of the environment	Grades 3-5: Knows the approximate location of major continents, mountain ranges, and bodies of water on Earth Grade 6: Uses thematic maps Grade 6: Knows the relative location, size of, and distances between places	*
Understands the concept of regions	Grades 3-5: Knows the characteristics of a variety of regions Grade 6: Understands criteria that give a region identity	*
Knows the physical processes that shape patterns on Earth's surface	Grades 3-5: Understands how physical processes help to shape features and patterns on Earth's surface Grade 6: Knows the major processes that shape patterns in the physical environment	*
Source: National Council of Teachers of English (NCTE), National Council for the Social Studies (NCSS), Geography Education Standards Project for Education and Learning (MREL).		

Lesson Overviews for Teachers and Parents

The following lessons are designed to be taught in the classroom and can be reinforced at home by parents through the Family Reproducible Worksheets. These lessons work best when completed in order but are designed to be flexible if used individually. You can share the goals for each lesson with your students.

<p>Lesson 1: Calling All Geographers</p> <p>Goals: Students will use map-reading and critical-analysis skills to learn about the geographical and environmental diversity of the United States and the ways that geography can influence weather and other natural events.</p> <p>Materials: Calling All Geographers Reproducible Worksheet 1, Physical Map Classroom Poster, pen/pencil</p> <p>Directions:</p> <ol style="list-style-type: none"> 1. Display the poster map. Have students identify the compass, legend (key), scale, and other map features. 2. Distribute Calling All Geographers Reproducible Worksheet 1. Separate students into pairs, and have each pair use the Physical Map Classroom Poster to complete the reproducible worksheet. 3. After students have completed the worksheet, review the answers together to check students' 	<p>Lesson 2: Ready for Any Weather</p> <p>Goals: Students will use reading, writing, and critical analysis to identify everyday skills that could be useful during an emergency.</p> <p>Materials: Ready for Any Weather Reproducible Worksheet 2, Physical Map Classroom Poster, pen/pencil</p> <p>Directions:</p> <ol style="list-style-type: none"> 1. Distribute Ready for Any Weather Reproducible Worksheet 2. Read the story aloud to students, or have them read it with a partner. 2. Check comprehension by reviewing the beginning, middle, and ending of the story. Have students answer the questions on the reproducible. Review and discuss the answers as a class. (Possible answers: 1. Dad is a careful 	<p>Lesson 3: Skills to Practice</p> <p>Goals: Students will use listening, communication, and critical-writing skills to apply what they have learned to write personal responses to questions and discuss readiness skills.</p> <p>Materials: Certificate of Readiness Reproducible Worksheet 3, Prepare and Practice Family Reproducible Worksheet, Physical Map Classroom Poster, Get Ready Crossword Puzzle Family Reproducible Worksheet, pen/pencil</p> <p>Directions:</p> <ol style="list-style-type: none"> 1. Find your home state on the map and review the information about your region as a class. Discuss how geography and climate influence the weather in your state. 2. Review the story from Lesson 2 with students again. Then have students write
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Figure 9 Snapshot from Ready kids — lesson guides are prepared under existing standard for emergency behavior skill of students

3) Experience from Australia

In Australia, curriculum frameworks in each State and Territory have common elements regardless how each describes its curriculum. Hazard or disaster education is evident, particularly in the Studies of Society and Environment (SOSE)-Human Society and Its Environment (HSIE) in NSW-and Science, Health and Physical Education learning areas (www.agta.asn.au). Generally, hazard education in schools is evident in years 5-6 and more comprehensively addressed in years 7-10. Most education systems in Australia include study of hazards in their post-compulsory geography course.

Primary school education

The Queensland SOSE syllabus covers years 1-10 with levels 1-4 being primarily covered in the primary school. The Place and Space strand provides teachers with the opportunity to explore some issues relating to hazard education, for example:

- PS 3.2: Students create and undertake plans that aim to influence decisions about an element of a place.
- PS 4.3: Students participate in a field-study to recommend the most effective ways to care for a place.

New South Wales is typical of the approach taken to hazard education in HSIE stage 3, where students are asked to "explain the impacts of natural changes on the environment such as floods, earthquakes and fires and how people respond to these changes"

http://www.bosnsw-k6.nsw.edu.au/hsie/pdf_doc/k6hsie_syllabus.pdf

Secondary school education

In Victoria, the geography of the Curriculum Standards Framework (CSF 11), provides broad learning outcomes into which disaster education fits. Topics and content are not prescribed. At level 5 (years 7-8), outcomes that can be addressed using hazards are:

- Compare the characteristics of significant regions in Australia and the world.
- Explain how natural processes and human activities change environments.
- Explain how people's use of natural and human environments change over time.
- Develop a plan to address impacts of change in level 6 (years 9-10).
- Explain the processes and interactions between people and major natural systems.

In the Geography Course of Study which accompanies the syllabus in Queensland, specific mention is made to include a unit on disasters or natural hazards as

part of a geography course aimed at providing interest and wide coverage of outcomes.

In South Australia, hazards education is included in the R-12 South Australian Curriculum Standards and Accountability Framework through the Space, Place and Environment in Society and Environment and Earth and Space in Science.

The SACSA Framework provides broad guidelines that teachers and schools use to develop their teaching and learning programs. Examples of opportunities to learn through hazards education are:

- Society and Environment, Middle Years (6-9), Space, Place and Environment strand key ideas - Students access, investigate, interpret and represent information from fieldwork, electronic systems and other research in order to explain local and global interactions and relationships between people and environments.
- Science, Middle Years (6-9), Earth and Space strand key ideas-Students investigate, through fieldwork and research, the central importance of the earth's role in sustaining life, how changes impact on life and understand the interaction of the atmosphere, the oceans and the earth's surface.

4) Model lesson plan developed by digital library for earth system education (DLESE) for earthquake education (<http://www.teachingboxes.org/index.jsp>)

DLESE developed a series of Teaching Boxes which are classroom-ready instructional units created by collaboration between teachers, scientists, and designers. Each box helps to bridge the gap between educational resources and how to implement them in the classroom. The Teaching Boxes contain materials that model scientific inquiry, allowing teachers to build classroom experiences around data collection and analysis from multiple lines of evidence, and engaging students in the process of science, focusing on gathering and analyzing scientific evidence. The Teaching Box features:

- Conceptual framework with the key scientific concepts that students should understand as a result of conducting the investigation
- National and state science, math, and language arts standards
- In-class lessons and activities
- Suggestions for homework and ways to extend the lessons for advanced learners
- Learner assessments and rubrics help determine student understanding
- Culminating activities to assess learning
- Selected digital library resources

Here is one example of complete lesson plan on "earthquake pattern" developed by DLESE as a Teaching Box:

Earthquake pattern

This lesson consists of three activities. Students will look at the cyclical nature of the Parkfield California earthquakes. Students will then investigate and graph earthquake occurrences on the Mojave segment of the San Andreas fault and then on the Hayward fault in order to see the relationships among fault length, recurrence interval, magnitude, and risk.

5) Experience of United Kingdom in disaster education

The National Curriculum (DfEE/QCA, 1999) provides general teaching requirements in schools in UK. Safety related learning are placed in science, design and technology, information and communication technology, art and design, and physical education (<http://www.teachernet.gov.uk>). It requires that pupils are taught procedures for assessing and controlling risks to themselves and others, and includes simple and concise definitions of hazard, risk, risk control, and risk assessment.

Safety education in PSHE and Citizenship should ideally build on this learning in other subjects and discuss how it can be applied to other contexts in pupils' lives, both in and out of school.

The general teaching requirement for health and safety requires teachers to teach pupils how to recognize hazards, Assess risk, and control risk.

Other aspects of safety education described above are addressed at all four key stages in the National Curriculum framework for PSHE and in Citizenship. Career-

related learning provides clear contexts for safety education and is included in the framework for PSHE at all key stages in the strand entitled "Developing confidence and responsibility and making the most of their abilities". Table below shows examples of how these aspects of the National Curriculum can contribute to safety education.

This table is based on the spiral curriculum. The notion of a spiral curriculum is familiar to teachers and forms the basis of the National Curriculum. In all subjects, knowledge, understanding and skills are built up in a step-wise way, with the same concepts being revisited at each Key Stage through differing activities.

As in other aspects of planning the formal curriculum, teachers will need to be aware of:

- how pupils' understanding of health and safety concepts develop; and
- the extent to which pupils can be expected to take their share of the responsibility for safety.

At each step teachers will need to find out:

- where pupils are in their understanding;
- what language pupils use to explain that understanding; and
- what skills pupils are capable of applying in a range of different situations.

In planning the curriculum, teachers also need to be aware of pupils' changing lifestyles, particularly age-related changes such as the transfer to secondary school.

Recognize hazards	A hazard is something with the potential to cause harm (this can include objects, substances, machines, ways of working and the working environment).
Assess risk	A risk is the likelihood of potential harm from the hazard being realized. The extent of the risk will depend on : ① the likelihood of that harm occurring ② the potential severity of that harm ③ the number of people who might be affected
Control risk	The purpose of the risk assessment is to determine what measures should be taken to control the risk, taking into account existing precautions and their effectiveness. Controlling a risk does not necessarily mean that the risk can be eliminated.

Adopted from HSE (1998)

Figure 10 Lesson plan on earthquake pattern (<http://www.teachingboxes.org/index.jsp>)

(i) Concepts and learning outcomes	<p>Students will understand that:</p> <p>Earthquakes may occur repeatedly at the same locations.</p> <p>Scientists examine the average time between ruptures as a useful measurement for assessing the risk the fault presents.</p> <p>The more time that passes between repeated surface ruptures on a single fault, the larger the earthquake.</p> <p>Smaller earthquakes cause less damage each time but occur more often.</p> <p>Earthquakes relieve strain that accumulates over time because of plate motion.</p>
(ii) Time requirements	Three 50-minute periods
(iii) Vocabulary	Rupture, recurrence interval, strike-slip fault, slip, right-lateral slip, slip rate
(iv) Background for teachers	<p>An article in the <u>Undergraduate Engineering Review</u> at the University of Wisconsin-Madison provides detailed information on the cyclic nature of earthquakes. It describes one way to think about the different stages before, during, and after an earthquake (it identifies 5 stages, though there are several other ways scientists divide them). It also gives several case studies about how information from each of these stages could one day be used to predict earthquakes. The reason for the cyclic nature of earthquakes is because the driving forces of plate tectonics never stop.</p> <p>Read about the <u>Parkfield Experiment</u>. This site describes the scientific background for the experiment, including the tectonic setting at Parkfield, CA, the historical earthquake activity on this section of the San Andreas fault, the monitoring and data collecting activities currently being carried out, and plans for future research. Start by reading the Introduction then click on Background, then on Earthquake Prediction (all on left side). Data are available to view in real-time and download.</p> <p>For background information to help you demonstrate to students that earthquakes repeat cyclically, go to <u>Parkfield: Earthquake Prediction: A Brief History</u>. This website gives historical background information on Parkfield, CA where six earthquakes have repeated in almost the same spot since 1857. The main point is that the earthquakes at Parkfield are all very similar in size and happen at a surprisingly regular interval (about once every 22 years). The regular pattern and the fact that the time between earthquakes is only a few decades rather than hundreds or thousands of years makes it the perfect place for scientists to study. The web page describes some of the equipment the United States Geological Survey (USGS) uses to study the fault during all stages of the earthquake cycle.</p>
(v) Teacher tip	<p>Activity 2 may be too difficult for some middle school students. The concepts will still be sufficiently covered if only Activity 1 is completed.</p> <p>Activities 2 and 3 are very similar. They simply use the data from two different locations. Depending upon student ability and time constraints you may want to consider the following options:</p> <p>Do Activity 2 together as a class activity so that students fully understand the directions and then have them complete Activity 3.</p> <p>Do Activity 2 (or 3) only, and use the other as an optional extension, extra credit, or homework.</p>
(vi) Activities	<ol style="list-style-type: none"> 1. <u>Patterns from Parkfield</u>: Students look at the cyclical nature of the Parkfield, California earthquakes. 2. <u>Patterns of Recurrence</u>: Students investigate and graph earthquake occurrences on the Mojave segment of the San Andreas fault in order to see the relationships among fault length, recurrence interval, magnitude, and risk. 3. <u>Recurrence on the Hayward Fault</u>: Students apply what they have learned about patterns of recurrence to patterns along the Hayward Fault.
(vii) Resources used	<p><u>Undergraduate Engineering Review</u> http://elvis.engr.wisc.edu/UER/uer96/author3/content.html <u>Parkfield Experiment</u> http://quake.wr.usgs.gov/research/parkfield/index.html <u>Parkfield: Earthquake Prediction: A Brief History</u> http://quake.wr.usgs.gov/research/parkfield/eq_predict.html</p>

(4) Gaps, opportunities and future actions

This study has revealed that there are basically no pre-thought strategies on disaster education in case-study countries though there is some contents related to hazard science, disaster occurrences, life safety in both primary and secondary education system. It is acknowledged by ministry of education officers in all three countries that there were no considerations of disaster in particular while they prepared the school curriculum. The content included so far, hence, is largely arbitrary which obviously does not meet the need.

At the same time, need has been felt in all countries for development of appropriate policies and strategies to include DRR into curriculum and preparing necessary materials such as teachers guideline, textbooks, references, and extra curricula materials.

In this section, the existing lacking and deficiencies are analyzed and opportunities are discussed on how DRR education can be better placed. The future actions are suggested to initiate the process of putting DRR education in place in primary and secondary education. Particular emphasis is on case-study countries context, though the analysis can be applicable in other countries too.

Gaps

Policy framework

School curriculum frameworks do not put reference to disaster education explicitly though the countries are frequently hit by disasters since long. Fiji national curriculum framework has one of the goals to develop healthy and safe societies although it seems limited to general health and safety from criminal activities and other conflict situations. In Indonesia, KPTS adopted after the 2004 big earthquake and tsunami disaster, does not cover the disaster content reflecting the situation.

There is general lack of expertise and capacity to formulate appropriate strategy for disaster education at national and state level where curriculum is being generally developed. There is general acknowledgment of lacking of the subject and content on disaster safety among officials. Still, no programs are in place to build capacity of experts of curriculum development sections in providing trainings on the subject. This could be a result of lack in overarching policy and broader political commitment at further higher level in disaster reduction

Coverage

The already limited hazard science and disaster safety content are placed in some particular

grades with no hierarchical consideration and distribution. This leads to a concentration of the subject matter in one grade and no references in other grades. This is contrary to the concept of gradual development of knowledge with proper consolidation and development of skill. It leads students to take those lessons just for examination purpose.

The disaster risk reduction knowledge has many aspects to be covered under different themes as necessitate, briefly to mention hazard science, hazard assessment, vulnerability study, risk development process, risk reduction measures, preparedness, emergency response, personal and collective safety, societal dimension of disaster management, volunteering work etc.

Accordingly, the DRR content goes in several subjects such as basic natural sciences, social studies, physical and health education, language, civil education etc. The study reveals that there is no balance of education in these aspects of DRR. In most of the cases, the DRR is limited to two aspects: basic science and safety instructions. There is some knowledge given on basic science- earthquake mechanism, cyclone formation etc. in higher grades 7-10 classes and safety instructions in emergency are provided in physical education, mostly in lower grades. Though basic science of hazard is good but it alone does not provide any knowledge for action to reduce the risk. The safety instruction lessons which are basically for personal safety in case of emergency alone does give students a insight how to reduce the risk of being in emergency. Similarly, the absence of knowledge in regards to risk accumulation process and its social dimension leads to think of natural disasters as unavoidable natural action - not as result of vulnerabilities.

Linkage and Integration

The substance on disasters in one theme or subject in the text books are not connected to linked part of the same in across the subjects in one class or across the grades. The life safety education from floods has not been connected to the cause and effect relation for flood occurrences. The lack of comprehensive approach to let the students know the reasons behind the suggested actions against disasters makes them unable to have confidence in taking such actions. If students are asked to go to the safe place in a building during earthquakes without giving them knowledge what makes some parts of buildings stronger than others, they can not simply follow it.

Disaster management is everybody's business. It

	Developing a healthy, safer lifestyle	Preparing to play an active role as citizens	Developing confidence, responsibility & making the most of their abilities
Key Stage 1	<ul style="list-style-type: none"> ▪ Learn ways to keep safe at home, school, play, on the roads. Practice asking for help. ▪ Learn and practice how to make choices. 	<ul style="list-style-type: none"> ▪ Help to agree classroom/playground/ dining room safety rules. ▪ Talk about how easy/ difficult it is to keep the rules; practice ways to get better at rule keeping. ▪ Consider how keeping or breaking safety rules can affect ourselves and others. 	<ul style="list-style-type: none"> ▪ Learn about roles and skills of adults who help us to keep safe (eg) School crossing patrol, midday supervisor Identify skills needed to co-operate with such adults. ▪ Practice these skills and reflect on how to get even better at them.
Key Stage 2	<ul style="list-style-type: none"> ▪ Learn how to recognize risks in different situations. Learn how to make more confident and informed choices. ▪ Learn how to recognize stereotypes. ▪ Prepare for transition to secondary school, eg identifying safe routes and means of travel 	<ul style="list-style-type: none"> ▪ Research and discuss safety issues eg. in the playground. ▪ Research the views, needs and feelings of others about such issues eg through surveys about playground safety issues. ▪ Take part in democratic decision -making of playground safety rules eg by presenting survey results to governors. 	<ul style="list-style-type: none"> ▪ Meet and talk with people who implement safety rules in the community - drivers, police, fire service, lifeguards - identify the skills they need. ▪ Identify the skills we need to make our own contribution to these safety issues. ▪ Plan how to practice one such skill.
Key Stage 3	<ul style="list-style-type: none"> ▪ Learn how to recognize and manage different kinds of risks. ▪ Learn to recognize when the influence of others threatens safety; develop ways to resist pressures, including asking for help. ▪ Learn about emergency aid procedures and where to get help and support. 	<ul style="list-style-type: none"> ▪ Be actively involved in school or community issues eg in safer travel projects. ▪ Learn how to be more effective in public life eg by identifying and practicing the skills needed to lobby or campaign on a local safety issue. 	<ul style="list-style-type: none"> ▪ Meet and work with people who can give reliable information about safety issues - eg trading standards officer, driving instructor, environmental health officer. ▪ Discuss safety issues in relation to the changing world of work. ▪ Consider personal skills and aptitudes regarding work related safety issues. ▪ Plan how to develop one such skill.
Key Stage 4	<ul style="list-style-type: none"> ▪ Learn to recognize and follow health and safety requirements, make risk assessments in unfamiliar contexts. ▪ Develop skills to cope with emergencies including basic aid and resuscitation techniques. <p>Develop assertiveness skills to deal with unhelpful pressure or to ask for help confidently.</p>	<ul style="list-style-type: none"> ▪ Develop a range of skills for involvement in school and community safety issues eg researching, publicizing, public speaking in support of safe play and leisure facilities for young people. ▪ Develop understanding of democratic and electoral processes. 	<ul style="list-style-type: none"> ▪ Reflect on safety aspects of future careers/ transitions. ▪ Discuss safety related rights and responsibilities of employers, employees, consumers. ▪ Identify safety related skills, qualifications and experience in records of achievement and Curriculum-Vitae (or CVs).

should be in culture of living. The prerequisite for this is to have knowledge in cross cutting themes and well integrated in all aspects of life. Obviously, it demands integration of DRR in education in all fronts of disaster management phases and cycle. Accordingly in school curricula, it needs to be in subjects of culture, social studies, sciences, health, etc. The study shows that there are no concepts in place while designing the curricula and text in this line.

Opportunities

Opportunities to fill the gaps and fix the deficiencies lie on institutionalization of DRR education in curricula and build capacity of government line agencies and teachers with development of necessary frameworks and guidelines. Education and awareness at the policy level is vital to put the system in place.

At the same time, there should be sufficient capacity at school level to teach the subject content to students. The formal education should be accompanied with extra curricula activities and also with general educational materials. The civil society and NGOs can play a vital role in advocacy and also supplying the supplementary knowledge on disaster reduction to the society. Here are some of those opportunities that can make difference:

In all three countries, the school education curricula is under constant review and improvement process. It is better to utilize this process to initiate for DRR education rather than waiting for a moment of complete revision. In implementation level, training of education experts who are involved in curricula development for disaster reduction subject matter follows a national program on teacher's training for disaster education.

In Fiji, there is an ongoing initiative by Department of Environment to integrate environmental management education into existing curriculum system. This is a good opportunity to blend the disaster education with environmental subject and also to make synergy in curriculum revision by incorporating disaster education at the same time. It can be applicable to the cases of Indonesia and Uzbekistan too where department of education is continually upgrading the curricula.

UNCRD initiative on school earthquake safety and ISDR campaign on "Disaster reduction begins at schools" provides a good opportunity for initiating curriculum upgrading for DRR integration.

In decentralized education system like in Indonesia, local hazard context can be incorporated at provincial and district level.

There is an observation that countries put some content on disaster which occur more frequently. The volcano education in Indonesia and cyclone lessons in Fiji are the result of ongoing and recurrent disasters in the region. However, with dissemination of disaster news, particularly big ones like 2004 earthquake and tsunami and 2005 Pakistan earthquake, there is heightened level of awareness and sensitization on low frequent disasters too. This opportunity should be utilized for incorporating the measure against devastating earthquake.

Beyond the need for education for emergency response, there should be an effort to build culture of prevention as a path to sustainable development. Such culture includes disaster-free built environment, well aware and motivated citizen, and thereby, resulting sustainable development practices.

Some efforts are being made in these countries in community level for an approach to DRR awareness, particularly from community based disaster management approach that includes community problem solving mechanism. This is an important and new development in disaster education that should be incorporated fully into the formal education system.

In summary, the DRR education should go with integrated concept that allows to put the comprehensive knowledge in all subjects taught at school. The considerations should be:

- Disaster education, as a perspective, should be integrated within subjects in a way that allows each subject to develop its own unique orientation toward natural hazard and disaster risk issues, concerns, and processes,
- Subject-based components, such as a module on the disaster risk implications of the land use plan in the geography syllabus, and
- Promotion of culture of safety action which promotes disaster awareness activity beyond the school grounds in ways that enhance the curriculum within the school.

With introduction of DRR education in school system, its implications on teacher education, resource materials development, teaching and learning, assessment and evaluation, curriculum development structures are to be examined.

The curriculum for DRR education should also

incorporate elements of indigenous knowledge and cultural practices related to natural resource management, city planning, construction system, many of which have proved to be sustainable.

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Appendix

- 1. Check-sheet of Disaster Management Curriculum in Schools**
- 2. Fact-sheet of Diploma, Undergraduate, Postgraduate and Certificate Courses on Disaster Management Studies**
- 3. University Curriculum Around the World**
- 4. Detailed Programs for Disaster Education for Community People**
- 5. Teaching Materials Developed by the Hyogo Prefectural Board of Education, Japan**
- 6. Compendium of Who What Where Recent Efforts in School Safety and Disaster Risk Reduction Education 2005-2007**

(Appendix is included in the attached CD-ROM.)

Appendix 1. Check sheet of disaster management curriculum in schools

Table 1. Check sheet of disaster management curriculum in schools of Australia – (Queensland)

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	N	N	N	Y	Y	N	N	N	N	N
Effects of disasters	N	N	N	Y	Y	Y	N	N	N	N
Lessons from past disasters	N	N	Y	Y	N	N	N	N	N	N
Disaster risk reduction/mitigation	Y	N	Y	Y	N	Y	Y	Y	N	N
Preparedness	Y	N	N	Y	Y	Y	N	Y	N	N
Response-rescue and relief	Y	N	Y	Y	Y	Y	N	Y	N	N
Reconstruction and Rehabilitation	N	N	N	Y	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	Y	N	N	N	N

Table 2. Check sheet of disaster management curriculum in schools of Iran

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	N	N	N	Y	N	N	N	N	N	N
Effects of disasters	N	N	N	Y	N	Y	N	N	N	N
Lessons from past disasters	N	N	N	Y	N	Y	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	Y	N	Y	N	N	N	N
Preparedness	N	N	N	Y	N	Y	N	N	N	N
Response-rescue and relief	N	N	N	Y	N	Y	N	N	N	N
Reconstruction and Rehabilitation	N	N	N	Y	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	Y	N	N	N	N

Table3. Check sheet of disaster management curriculum in Schools of Nepal

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	Y	Y	Y	Y	Y	N	Y	NI	NI	Y
Effects of disasters	Y	Y	Y	Y	Y	Y	Y	NI	NI	N
Lessons from past	N	N	N	N	N	N	Y	NI	NI	N

disasters										
Disaster risk reduction/mitigation	Y	Y	Y	Y	N	N	Y	NI	NI	N
Preparedness	N	N	N	N	N	N	Y	NI	NI	N
Response-rescue and relief	N	N	N	Y	N	N	Y	NI	NI	N
Reconstruction and Rehabilitation	N	N	N	Y	N	N	Y	NI	NI	N
Role of community/institution	Y	Y	Y	Y	N	N	Y	NI	NI	Y

Table 4. Check sheet of disaster management curriculum in Higher Primary Schools of New Zealand

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Effects of disasters	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Lessons from past disasters	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Disaster risk reduction/mitigation	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Preparedness	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Response-rescue and relief	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Reconstruction and Rehabilitation	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Role of community/institution	NI	NI	NI	Y	Y	Y	Y	NI	N	N

Table 5. Check sheet of disaster management curriculum in Secondary Schools of New Zealand

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Effects of disasters	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Lessons from past disasters	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Disaster risk reduction/mitigation	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Preparedness	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Response-rescue and relief	NI	NI	NI	Y	Y	Y	Y	NI	N	N
Reconstruction and Rehabilitation	NI	NI	NI	Y	Y	Y	Y	NI	N	N

Role of community/institution	NI	NI	NI	Y	Y	Y	Y	NI	N	N
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Table 6. Check sheet of disaster management curriculum in Schools of United Kingdom

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	Y	Y	NI	Y	Y	NI	NI	NI	NI	Y
Effects of disasters	Y	Y	NI	Y	Y	Y	NI	NI	NI	Y
Lessons from past disasters	Y	NI	NI	Y	Y	Y	NI	NI	NI	Y
Disaster risk reduction/mitigation	NI	NI	NI	N	NI	NI	NI	NI	NI	NI
Preparedness	NI	NI	NI	NI	N	N	NI	NI	NI	NI
Response-rescue and relief	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and Rehabilitation	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 7. California Department of Education, USA

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	N	N	N	Y	N	N	N	N	N	N
Effects of disasters	N	N	N	Y	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	Y	N	N	Y	N	Y	N	N	N	N
Preparedness	Y	N	N	Y	N	N	N	N	N	N
Response-rescue and relief	Y	N	Y	Y	Y	Y	N	N	Y	N
Reconstruction and Rehabilitation	N	N	N	Y	N	N	N	N	N	N/A
Role of community/institution	Y	Y	N	Y	N	Y	N	N	N	N

Table 8. National Clearinghouse for Educational Facilities, Washington, D.C. USA

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	N	N	N	N	N	N	N	N	N	N

Effects of disasters	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N
Preparedness	N	N	N	N	N	N	N	N	N	N
Response-rescue and relief	N	N	N	N	N	N	N	N	N	N
Reconstruction and Rehabilitation	N	N	N	N	N	N	N	N	N	N/A
Role of community/institution	N	N	N	N	N	N	N	N	N	N

Table 9. Arizona Dept. of Education, Arizona Division of Emergency Management, Phoenix, USA

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	N	N	N	N	N	N	N	N	N	N
Effects of disasters	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	Y	Y	N	Y	Y	Y	Y	Y	Y	N
Preparedness	N	N	N	Y	N	N	N	N	N	N
Response-rescue and relief	Y	Y	N	Y	N	N	N	N	N	N
Reconstruction and Rehabilitation	Y	Y	N	N	N	N	N	N	N	N/A
Role of community/institution	N	N	N	N	N	N	N	N	N	N

Table 10. Florida Department of Education, Office of Educational Facilities, Tallahassee, USA

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	N	N	N	N	N	N	N	N	N	N
Effects of disasters	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	Y	Y	N	Y	Y	Y	Y	Y	Y	N
Preparedness	Y	N	N	Y	Y	Y	Y	Y	Y	Y
Response-rescue and relief	Y	Y	N	Y	Y	Y	Y	Y	Y	N

Reconstruction and Rehabilitation	Y	Y	N	Y	Y	Y	Y	N	N	N/A
Role of community/institution	Y	Y	N	Y	Y	Y	Y	N	N	N

Table 11. Federal Emergency Management Agency, USA

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	Y	N	N	N	N	N	N	N	N	N
Effects of disasters	Y	Y	N	Y	N	Y	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	Y	Y	N	Y	Y	Y	Y	Y	Y	N
Preparedness	Y	N	N	Y	Y	Y	Y	Y	Y	Y
Response-rescue and relief	Y	Y	N	Y	Y	Y	Y	Y	Y	N
Reconstruction and Rehabilitation	N	N	N	Y	Y	Y	Y	N	N	N/A
Role of community/institution	N	N	N	Y	Y	N	N	N	N	N

Table 12. Organization for Economic Cooperation and Development, Paris

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	N	N	N	Y	N	N	N	N	N	N
Effects of disasters	N	N	N	Y	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	Y	N	N	N	N	N	N
Preparedness	N	N	N	Y	N	N	N	N	N	N
Response-rescue and relief	N	N	N	Y	N	N	N	N	N	N
Reconstruction and Rehabilitation	N	N	N	N	Y	N	N	N	N	N/A
Role of community/institution	N	N	N	N	N	N	N	N	N	N

Table 13. Department of Homeland Security's Federal Emergency Management Agency (FEMA, Washington, D.C.), USA

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
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Cause and nature of disasters	Y	N	Y	Y	N	Y	Y	N	Y	N
Effects of disasters	Y	N	N	Y	N	Y	Y	N	N	N
Lessons from past disasters	Y	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	Y	N	N	Y	N	Y	Y	N	Y	N
Preparedness	Y	N	N	Y	N	Y	N	N	N	N
Response-rescue and relief	Y	N	N	Y	N	N	N	N	N	N
Reconstruction and Rehabilitation	Y	N	N	Y	Y	N	N	N	Y	N
Role of community/institution	Y	N	N	Y	N	N	Y	N	Y	N

Table 14. Caribbean Disaster Emergency Response Agency; European Humanitarian Office Disaster Preparedness Programme, USA

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	N	N	N	N	N	N	N	N	N	N
Effects of disasters	Y	N	N	Y	N	Y	Y	N	N	N
Lessons from past disasters	Y	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	Y	N	N	N	N	N	N	N	N	N
Preparedness	Y	N	N	N	N	Y	N	N	N	N
Response-rescue and relief	Y	N	N	Y	N	N	N	N	N	N
Reconstruction and Rehabilitation	N	N	N	Y	Y	N	N	N	N	N
Role of community/institution	Y	N	N	N	N	N	N	N	N	N

Table 15. Arkansas Centre for Earthquake Education and Technology Transfer, USA

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	N	N	N	N	N	N	N	N	N	N
Effects of disasters	N	N	N	Y	N	N	Y	N	N	N
Lessons from past disasters	N	N	N	Y	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	Y	N	N	N	N	N	N

Preparedness	N	N	N	Y	N	N	N	N	N	N
Response-rescue and relief	N	N	N	Y	N	N	N	N	N	N
Reconstruction and Rehabilitation	N	N	N	Y	Y	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N

Table 16. Southern California Earthquake Preparedness Project, Los Angeles, CA, USA

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	N	N	N	N	N	N	N	N	N	N
Effects of disasters	N	N	N	Y	N	N	Y	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	Y	N	N	N	N	N	N
Preparedness	N	N	N	Y	N	N	N	N	N	N
Response-rescue and relief	N	N	N	Y	N	N	N	N	N	N
Reconstruction and Rehabilitation	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	Y	N	N	N	N	N	N

Table 17. Check sheet of disaster management curriculum in class V of CBSE Board (India)

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	Y	N	N	Y	N	Y	N	N	N	Y
Effects of disasters	Y	N	N	Y	N	N	N	N	N	Y
Lessons from past disasters	N	N	N	Y	N	N	N	N	N	N
Disaster risk reduction/mitigation	Y	N	N	N	N	N	N	N	N	Y
Preparedness	Y	N	N	N	N	N	N	N	N	Y
Response-rescue and relief	Y	N	N	Y	N	N	N	N	N	Y
Reconstruction and Rehabilitation	N	N	N	Y	N	N	N	N	N	N
Role of community/institution	Y	N	N	N	N	N	N	N	N	Y

Table 18 Check sheet of disaster management curriculum in class VIII of CBSE Board (India)

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	Y	N	N	Y	N	Y	N	N	N	Y
Effects of disasters	Y	N	N	Y	N	Y	N	N	N	Y
Lessons from past disasters	N	N	N	Y	N	Y	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	Y	N	Y	N	N	N	Y
Preparedness	Y	N	N	Y	N	Y	N	N	N	Y
Response-rescue and relief	Y	N	N	Y	N	Y	N	N	N	N
Reconstruction and Rehabilitation	N	N	N	Y	N	N	N	N	N	N/A
Role of community/institution	N	N	N	N	N	Y	N	N	N	Y

Table 19 Check sheet of disaster management curriculum in class IX of CBSE Board (India)

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	Y	Y	N	Y	N	Y	N	N	N	Y
Effects of disasters	Y	Y		Y		Y	N	N	N	Y
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	Y	Y		Y		Y	N	N	N	Y
Preparedness	N	N	N	N	N	N	N	N	N	N
Response-rescue and relief	N	N	N	N	N	N	N	N	N	N
Reconstruction and Rehabilitation	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N

Table 20 Check sheet of disaster management curriculum in class X of CBSE Board (India)

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
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Cause and nature of disasters	N	N	N	N	N	N	N	N	Y	N
Effects of disasters	Y	N	N	N	N	N	N	N	Y	N
Lessons from past disasters	N	N	N	N	N	N	N	N	Y	N
Disaster risk reduction/mitigation	Y	Y	Y	Y	N	Y	N	N	Y	N
Preparedness	N	N	N	N	N	N	N	N	Y	N
Response-rescue and relief	N	N	N	N	N	N	N	N	Y	N
Reconstruction and Rehabilitation	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N

Table 21 Check sheet of disaster management curriculum in class XI of CBSE Board (India)

	Flood	Land slide	Mudslide/Av alanche	Earthq uake	Volca no	Hurricane /Cyclone	Torn ado	Wildfi re	Tsun ami	Drou ght
Cause and nature of disasters	Y	Y	Y	Y	N	Y	Y	N	Y	Y
Effects of disasters	Y	Y	Y	Y	N	Y	Y	N	Y	Y
Lessons from past disasters	Y	Y	Y	Y	N	Y	Y	N	Y	Y
Disaster risk reduction/mitigation	Y	Y	Y	Y	N	Y	Y	N	Y	Y
Preparedness	Y	Y	Y	Y	N	Y	Y	N	Y	Y
Response-rescue and relief	Y	Y	Y	Y	N	Y	Y	N	Y	Y
Reconstruction and Rehabilitation	Y	Y	Y	Y	N	Y	Y	N	Y	Y
Role of community/institution	N	N	N	N	N	N	N	N	N	Y

Source: Websites of the Educational Institutions and other internet-based publicly-available sources.

Appendix 2. Fact-sheet of Diploma, Undergraduate, Postgraduate, and Certificate Courses on disaster management studies

N ---	Aspect not covered
A+ ---	Aspect covered to advanced level
A ---	Aspect covered to medium level
A- ---	Aspect covered to basic level
NI ---	Information not available

1) DIPLOMA COURSES AT VARIOUS UNIVERSITIES Part I – On Campus Courses

Table 1. BRAC UNIVERSITY, BANGLADESH (Department of Architecture)

Post Graduate Diploma in Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	--	A+	N	N	A+	N	A+	N	N	N	N	N
Lessons from past disasters	--	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	--	A-	N	N	A-	N	A-	N	N	N	N	N
Disaster risk reduction/mitigation	--	N	N	N	A+	N	N	N	N	N	N	N
Preparedness	--	A+	N	N	A+	N	A+	N	N	N	N	N
Response-rescue relief and recovery	--	A+	N	N	A+	N	A+	N	N	N	N	N
Reconstruction and rehabilitation	--	N	N	N	N	N	A+	N	N	N	N	N
Role of community/institution	--	A	N	N	A	N	A	N	N	N	N	N
Organizational and policy context	--	A+	N	N	A+	N	A+	N	N	N	N	N
GIS and remote sensing	--	A+	N	N	A+	N	A+	N	N	N	N	N
Information systems and communication	--	N	N	N	N	N	N	N	N	N	N	N
Business continuity	--	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	--	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	--	N	N	N	N	N	N	N	N	N	N	N

Table 2. MASSEY UNIVERSITY, NEW ZEALAND

(College of Humanities & Social Sciences and College of Business)

Graduate Diploma in Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	--	A+	A+	N	A+	A+	A+	N	N	N	A+	N
Lessons from past disasters	--	A	A	N	A	A	A	N	N	N	A	N
Risk identification, analysis and assessment	--	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	--	N	N	N	A+	N	N	N	N	N	N	N
Preparedness	--	A+	A+	N	A+	A+	A+	N	N	N	A+	N
Response-rescue relief and recovery	--	A	A	N	A	A	A	N	N	N	A	N
Reconstruction and rehabilitation	--	A+	A+	N	A+	A+	A+	N	N	N	A+	N
Role of community/institution	--	A+	A+	N	A+	A+	A+	N	N	N	A+	N
Organizational and policy context	--	A+	A+	N	A+	A+	A+	N	N	N	A+	N
GIS and remote sensing	--	A+	A+	N	A+	A+	A+	N	N	N	A+	N
Information systems and communication	--	A+	A+	N	A+	A+	A+	N	N	N	A+	N
Business continuity	--	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	--	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	--	N	N	N	N	N	N	N	N	N	N	N

Table 3. UNIVERSITY OF CANTERBURY, CHRISTCHURCH, NEW ZEALAND

(College of Science, Geological Sciences Department)

Post Graduate Diploma in Science (Hazard and Disaster Management)

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Lessons from past disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Preparedness	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	N
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Information systems and communication	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	N	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 4. COVENTRY UNIVERSITY, UK

(Coventry Business School)

Business Continuity Certificate/Diploma Course

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Lessons from past disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Preparedness	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	N
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Information systems and communication	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	N	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table. 5 COVENTRY UNIVERSITY, UK

(Coventry Business School)

Emergency Planning Diploma Course

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 6. COVENTRY UNIVERSITY, UK

(Coventry Business School)

Health Emergency Planning-Certificate/Management-Diploma Course

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	N	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+

COVENTRY UNIVERSITY, UK

(Operational Management & Technical Support for Specialist Rescue)

(Collaborative venture between Coventry Business School, Fire Service College and Outreach Organization)

All Aspect not covered

2) DIPLOMA COURSES AT VARIOUS UNIVERSITIES
Part II - Distance Learning and Online Courses

Table 7. SOUTHERN CROSS UNIVERSITY, AUSTRALIA
(School of Human Services)
 Graduate Diploma in Community Development/Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 8. SWINBURNE UNIVERSITY OF TECHNOLOGY, MELBOURNE, AUSTRALIA

Graduate Diploma of Emergency and Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 9. UNIVERSITY OF WISCONSIN, Madison, USA

(Disaster Management Centre)

Disaster Management Diploma Program (Started in 1994)

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Reconstruction and rehabilitation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Role of community/institution	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Organizational and policy context	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	A	NI	NI	A+
Emergency medical services	A+	NI	NI	NI	NI	NI	NI	NI	A	NI	NI	A+

3) UNDERGRADUATE COURSES AT VARIOUS UNIVERSITIES Part I – On Campus Courses

Table 10. BRANDON UNIVERSITY, MANITOBA, CANADA

(Department of Applied Disaster and Emergency Studies)

B. Sc in Applied Disaster and Emergency Studies: Disaster Science Concentration

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	A+	NI	NI	NI	NI	NI	NI	NI	A+	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A+	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	N	NI	N	N	N	N	N	N	N	N	N	N
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 11. BRANDON UNIVERSITY, MANITOBA, CANADA

(Department of Applied Disaster and Emergency Studies)

BA in Applied Disaster and Emergency Studies: Planning and Management Concentration

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 12. UNIVERSITY COLLEGE OF CAPE BRETON, CANADA

(School of Science and Technology, Department of Engineering)

Bachelor of Technology in Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 13. UNIVERSITY OF CANTERBURY, Christchurch, New Zealand

(College of Science, Geological Sciences Department)

Bachelor of Science Honours (Hazard and Disaster Management)

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	N
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	N	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 14. AMERICAN MILITARY UNIVERSITY, USA

(Centre for Professional Development) (Fire and weapons)

Bachelor of Arts in Emergency and Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 15. CALIFORNIA UNIVERSITY OF PENNSYLVANIA, USA

(Department of Earth Sciences)

BA in Geography with Geographic Information Sciences and Emergency Management Concentration

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 16. EASTERN MICHIGAN UNIVERSITY, USA

(College of Arts and Science, political Science Department)

BSc Degree in Public Safety Administration with Emergency Management Concentration

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	N
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 17. EAST TENNESSEE STATE UNIVERSITY, USA

(Department of Public and Allied health, Department of Environmental health)

Emergency/Disaster Response Management Undergraduate Minor

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 18. JACKSONVILLE STATE UNIVERSITY

(Institute of Emergency Preparedness)

Bachelor of Science in Emergency Management with a minor in Homeland Security

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 19. LOUISIANA STATE UNIVERSITY, Baton Rouge

(College of Arts and Sciences and LSU hurricane Centre)

Undergraduate Minor in Disaster Science and Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 20. MILLERSVILLE UNIVERSITY OF PENNSYLVANIA, USA

(Centre for Disaster Research and Education)

Multi-Disciplinary Minor in Environmental Hazards and Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	A+
Preparedness	N	N	N	N	N	N	N	N	N	N	N	A+
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	A+
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	N	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 21. North Dakota STATE UNIVERSITY, Fargo ND, USA

(Department of Sociology/Anthropology)

Minor in Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 22. SHAW UNIVERSITY, North Carolina, USA

(Department of Business and Public Administration)

BA Degree in Public Administration with a Concentration in Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 23. TOURO UNIVERSITY INTERNATIONAL, USA

(College of Health Sciences)

Bachelor of Science in Health Sciences

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 24. UNIVERSITY OF CENTRAL MISSOURI, Warrensburg USA

(Department of Safety Science and Technology)

Bachelor of Science Degree in Crisis and Disaster Management: Emergency Management Option

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 25. UNIVERSITY OF CENTRAL MISSOURI, Warrensburg USA

(Department of Safety Science and Technology)

Bachelor of Science Degree in Crisis and Disaster Management: Hazardous Materials Option

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 26. UNIVERSITY OF CENTRAL MISSOURI, Warrensburg, USA

(Department of Safety Science and Technology)

Bachelor of Science Degree in Crisis and Disaster Management: Business Continuity Option

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 27. UNIVERSITY OF FINDLAY USA

(School of Environmental and Emergency Management)

Bachelor of Science in Environmental, Safety and Occupational Health Management, Emphasis in Emergency

Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	A	NI	NI	NI	NI	NI	NI	NI	NI	A-	NI	NI
Disaster risk reduction/mitigation	A	NI	NI	NI	NI	NI	NI	NI	NI	A-	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 28. UNIVERSITY OF CENTRAL FLORIDA, Orlando, USA

(College of Health and Public Affairs)

Minor in Emergency Management and Homeland Security

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 29. UNIVERSITY OF NORTH TEXAS, USA

(College of Public Affairs and Community Service, Department of Public Administration)

BS with a major in Emergency Administration and Planning

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

4) UNDERGRADUATE COURSES AT VARIOUS UNIVERSITIES Part II – Distance Learning and Online Courses

Table 30. CHARLES STURT UNIVERSITY, New South Wales, Australia

(Faculty of Health Studies)

Bachelor of Social Science with an Emphasis in Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 31. AMERICAN PUBLIC UNIVERSITY, USA

Bachelor of Arts in Emergency and Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	N	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 32. EMPIRE STATE COLLEGE, New York, USA

(Centre for Distance Learning)

Bachelor of Science with an Emergency Management Concentration

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	A+
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 33. UNIVERSITY OF FLORIDA, Gainesville, USA

[\(M.E. Rinker Sr. School of Building Construction\)](#)

Bachelor of Science in Fire and Emergency Services

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	A	N	N	N	N	A	A	N	N	N	N
Lessons from past disasters	N	A	N	N	N	N	A	A	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	A-	N	N	N	N	A-	A-	N	N	N	A
Preparedness	N	N	N	N	N	N	N	N	N	N	N	A
Response-rescue relief and recovery	N	A-	N	N	N	N	A-	A-	N	N	N	A+
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	A+
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	A+
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	A+
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	N	A-	N	N	N	N	A-	A-	N	N	N	A+
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	A+

Table 34. UNIVERSITY OF RICHMOND, Virginia, USA

(School of Continuing Studies)

Bachelor of Applied Science in Emergency Services Management: Emergency Management Minor

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 35. UNIVERSITY OF RICHMOND, Virginia, USA

(School of Continuing Education)

Bachelor of Applied Science in Emergency Services Management: Business Continuity Minor

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 36. UNIVERSITY OF RICHMOND, Virginia, USA

(School of Continuing Education)

Bachelor of Applied Science in Emergency Services Management: Homeland Defense Minor

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	N
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

5) GRADUATE COURSES AT VARIOUS UNIVERSITIES Part I – On Campus Courses

Table 37. UNIVERSITY OF BRITISH COLUMBIA, CANADA (The School of Community and Regional Planning)

Master's Degree in Planning with Specialization in Disaster and Risk Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	A	NI	NI	A	NI	NI	A	NI	A	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A	A	NI	NI	A	NI	NI	A	NI	A	NI	NI
Disaster risk reduction/mitigation	A	A	NI	NI	A	NI	NI	A	NI	A	NI	NI
Preparedness	A	A	NI	NI	A	NI	NI	A	NI	A	NI	NI
Response-rescue relief and recovery	A	A	NI	NI	A	NI	NI	A	NI	A	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	A+	A+	NI	NI	A+	NI	NI	A+	NI	A+	NI	NI
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+											
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 38. NATIONAL GRADUATE INSTITUTE OF POLICY STUDIES (BRI and JICA)

Master of Disaster Mitigation

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	A+	N	N	N	N	N	A+	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	A+	N	N	N	N	N	A+	N
Disaster risk reduction/mitigation	N	N	N	N	A+	N	N	N	N	N	A+	N
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	N
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	A+	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A+	N	N	N	A+	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	N	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 39. NEPAL ENGINEERING COLLEGE, NEPAL

Master's in Disaster Risk Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A-	NI	NI	NI	A+	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A-	NI	NI	NI	A	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A-	NI	NI	NI	A	NI	NI	NI	NI	NI	NI	NI
Preparedness	A	NI	NI	NI	A	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A-	NI	NI	NI	A	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	A+	NI	NI	NI	A	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	A+	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 40. ISTANBUL TECHNICAL UNIVERSITY, TURKEY

Master's Degree in Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	N
Reconstruction and rehabilitation	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 41. COVENTRY UNIVERSITY, UK

(School of Science and The Environment)

Master of Science by Research in Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	A+	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	A+	N	N	N	N
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 42. COVENTRY UNIVERSITY, UK

(School of Science and The Environment)

Disaster Management MSc degree

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 43 COVENTRY UNIVERSITY, UK

(School of Science and The Environment)

Emergency Planning MSc by Research degree

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 44. NORTHUMBRIA UNIVERSITY, UK

MSc in Disaster Management and Sustainable Development

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 45. FLORIDA STATE UNIVERSITY, USA

(College of Social Sciences and the Askew School of Public Administration and Policy)

Master's Degree in Public Administration with Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 46. JAKSONVILLE STATE UNIVERSITY, Alabama, USA

(Institute of Emergency Preparedness)

Master of Public Administration with a Concentration in Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 47. METROPOLITAN COLLEGE OF NEW YORK, USA

(School of Public Affairs and Administration)

Master of Public Administration in Emergency and Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 48. TOURO UNIVERSITY, California, USA

(College of Health Sciences)

Masters in Emergency and Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 49. University of Richmond, Virginia, USA

(School of Continuing Studies)

Master of Disaster Science

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

6) GRADUATE COURSES AT VARIOUS UNIVERSITIES Part II – Distance Learning and Online Courses

Table 50. INDIAN INSTITUTE OF ECOLOGY AND ENVIRONMENT, INDIA

Master of Science in Disaster Mitigation

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	--	A+	A+	A+	A+	A+	A+	A+	N	A+	A+	A+
Lessons from past disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	--	A+	A+	A+	A+	A+	A+	A+	N	A+	A+	A+
Disaster risk reduction/mitigation	--	A+	A+	A+	A+	A+	A+	A+	N	A+	A+	A+
Preparedness	--	A+	A+	A+	A+	A+	A+	A+	N	A+	A+	A+
Response-rescue relief and recovery	--	A+	A+	A+	A+	A+	A+	A+	N	A+	A+	A+
Reconstruction and rehabilitation	--	A-	A-	A-	A-	A-	A-	A-	N	A-	A-	A-
Role of community/institution	--	A-	A-	A-	A-	A-	A-	A-	N	A-	A-	A-
Organizational and policy context	--	A	A	A	A	A	A	A	N	A	A	A
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	--	A+	A+	A+	A+	A+	A+	A+		A+	A+	A+
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

7) CERTIFICATE COURSES AT VARIOUS UNIVERSITIES

Table 51. GEORGE BROWN COLLEGE, CANADA

(Centre for Continuous Learning)

Emergency Management Certificate

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	N	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 52. GEORGE BROWN COLLEGE, CANADA

(Centre for Continuous Learning)

Incident Command Management Certificate

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 53. GEORGE BROWN COLLEGE, CANADA

(Centre for Continuous Learning)

Safety, Security and Response to Terrorism Certificate

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 54. GEORGE BROWN COLLEGE, CANADA

(Centre for Continuous Learning)

Public Health Emergency Management Certificate

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 55. GEORGE BROWN COLLEGE, CANADA

(Centre for Continuous Learning)

Psychology of Disaster Certificate

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	N
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 56. GEORGE BROWN COLLEGE, CANADA

(Centre for Continuous Learning)

Mass Transit and Disaster Management Certificate

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 57. JUSTICE INSTITUTE OF BRITISH COLUMBIA, CANADA

Emergency Management Certificate

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Information systems and communication	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 58. YORK UNIVERSITY, CANADA

(School of Administrative Studies)

Professional Certificate in Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency planning	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 59. INDIRA GANDHI NATIONAL OPEN UNIVERSITY, INDIA

Certificate in Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	N	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 60. TOURO UNIVERSITY INTERNATIONAL, USA

(College of Health Sciences)

Certificate in Emergency and Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Organizational and policy context	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Table 61. TOURO UNIVERSITY INTERNATIONAL, USA

(College of Health Sciences)

Graduate Certificate in Emergency and Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	N
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 62. UNIVERSITY OF NORTH CAROLINA, USA

(UNC School of Public Health)

Certificate in Community Preparedness and Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 63. EMERGENCY MANAGEMENT ACADEMY OF NEW ZEALAND

Level 2 Certificate in Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	A-	N	N	N	N	A-	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	A	N	N	N	N	N	N	N	N	N	A
Preparedness	A	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	A+	N	N	N	N	A+	N	N	N	N	N
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A+	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A	A+	N	N	N	N	A+	N	N	N	N	N
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 64. EMERGENCY MANAGEMENT ACADEMY OF NEW ZEALAND

Level 4 Certificate in Emergency Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	A-	N	N	N	N	A-	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	A	N	N	N	N	N	N	N	N	N	A
Preparedness	A	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	A+	A+	N	N	N	N	A+	N	N	N	N	N
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A+	A	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A	A+	N	N	N	N	A+	N	N	N	N	N
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 65. TECHNIKON SOUTH AFRICA

Certificate Course in Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A	NI	NI	NI	NI	NI	NI	A+	NI	NI	NI	NI
Lessons from past disasters	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Risk identification, analysis and assessment	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	N
Reconstruction and rehabilitation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 66. ROCHESTER INSTITUTE OF TECHNOLOGY, USA

(College of Applied Sciences and Technology)

Disaster and Emergency Management Certificate

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	N	N	N	N	N	N	N	N	N	N	N	N
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	N	N	N	N	N	N	N	N	N	N	N	N
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Response-rescue relief and recovery	N	N	N	N	N	N	N	N	N	N	N	N
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	N	N	N	N	N	N	N	N	N	N	N	N
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	N	N	N	N	N	N	N	N	N	N	N	N
Emergency planning	A+	N	N	N	N	N	N	N	N	N	N	N
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Table 67. UPPER IOWA UNIVERSITY, USA

(Extended University)

Certificate in Emergency and Disaster Management

	General	Flood	Land slide	Soil erosion	Earth-quake	Volcano	Wind Storm	Drought	Epidemic	Pollution	Tsunami	Fire
Cause, nature and effects of disasters	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Lessons from past disasters	N	N	N	N	N	N	N	N	N	N	N	N
Risk identification, analysis and assessment	N	N	N	N	N	N	N	N	N	N	N	N
Disaster risk reduction/mitigation	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Preparedness	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Response-rescue relief and recovery	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Reconstruction and rehabilitation	N	N	N	N	N	N	N	N	N	N	N	N
Role of community/institution	N	N	N	N	N	N	N	N	N	N	N	N
Organizational and policy context	A	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A
GIS and remote sensing	N	N	N	N	N	N	N	N	N	N	N	N
Information systems and communication	N	N	N	N	N	N	N	N	N	N	N	N
Business continuity	A-	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A-
Emergency planning	A+	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	A+
Emergency medical services	N	N	N	N	N	N	N	N	N	N	N	N

Source: Websites of the Educational Institutions and other internet-based publicly-available sources.

Appendix 3. University curricula around the world

Source: Websites of the Educational Institutions and other internet-based publicly-available sources.

(1) DIPLOMA LEVEL CURRICULUM WORLD WIDE 1) -ON CAMPUS COURSES

BRAC UNIVERSITY

COUNTRY: BANGLADESH

Department /School: Department of Architecture

Course: Post Graduate Diploma in Disaster Management
Curriculum Description

Semester 1 of the diploma program consists of 15 credits comprised of 2 foundation courses (4 credits), 2 core courses (6 credits), 1 elective course (3 credits) and 1 field study (2 credits).

In Semester 02, students will be required to complete another 15 credits comprised of 2 foundation courses (4 credits), 2 core courses (6 credits), 1 elective course (3 credits) and 1 field study (2 credits). At this level, a wider choice of electives are offered

Courses Offered in Curriculum:

The contents of the course comprised of three main components: lectures/seminars, field studies and individual student projects. Expert lectures and seminars are part of the curriculum. Field visits are arranged to relevant disaster-prone areas and disaster management projects and students will prepare reports as part of the field studies courses. Each student has to undertake independent study projects during both semesters (more complex and detailed Semester 02), under the guidance of a relevant tutor, to be presented and submitted as terminal assignments.

The course contents are related to three main aspects:

- (1) Pre-disaster preparedness and vulnerability reduction.
- (2) Post-disaster response, relief and rehabilitation.
- (3) Disaster mitigation and long-term development (Pre-disaster + Post-disaster).

Semester 01

Foundation Courses (2 credits each)

1. Introduction to Hazards and Disasters
2. Fundamentals of Disaster Management

Core Courses (3 credits each)

1. Disaster Response and Recovery Strategies
2. Independent Study in Disaster Management I

Elective Courses (3 credits) (any one of the following)

1. Riverine Disaster Management
2. Cyclone and Tornado Preparedness and Rehabilitation
3. Earthquake Vulnerability Reduction
4. Community-Based Approaches to Disaster Management

Field Study I (2 credits)

Semester 02

Foundation Courses (2 credits each)

1. Organizational and Policy Context of Disaster Management
2. Research and Analytical Methods

Core Courses (3 credits each)

1. Disaster Preparedness and Vulnerability Reduction
2. Independent Study in Disaster Management II

Elective Courses (3 credits) (any one of the following)

1. GIS and Remote Sensing Techniques in Disaster Management
2. Building Design and Construction in Disaster-Prone Areas
3. Urbanization and Disasters

4. Risk Communication, Training and Public Awareness
5. Gender Issues in Disaster Management
6. Disaster Risk Reduction and Development Planning
Field Study II (2 credits), Preparatory Course (if required)

Massey University

Country: New Zealand

Department /School: College of Humanities & Social Sciences and College of Business

Course: Graduate Diploma in Emergency Management

Courses Offered in Curriculum

Natural hazards:

Coping with Disasters: Study of the human issues and problems involved in preparing for and coping with disasters. Attitudes towards disaster preparation are studied together with the nature of disasters and their effects on human beings. The organization and control of human behavior during disasters will be studied together with rehabilitation interventions, particularly for the alleviation of stress for those involved.

Emergency management: An examination of the social, psychological, community and organizational aspects of disaster management in New Zealand. Emphasis is on the development and implementation of an all-hazards, comprehensive and integrated approach to emergency management. Selected readings and case studies are used to facilitate the development of an effective response to social, psychological, community and organizational issues.

Human resource development: An introduction to the process of training and human resource development within organizations. The paper is modeled on a learner-centered, systematic approach to training. Emphasis is placed on principles of effective human resource development in the areas of personal development, course design and on-the-job training.

Occupational safety and health I:

An introduction to the principles of occupational safety and health and their application to workplaces in New Zealand. Topics include: the causes of accidents and injuries; health and safety legislation; accident investigation and prevention; fundamentals of industrial toxicology and case studies.

Occupational safety and health II:

Detailed studies of hazards commonly found in the work environment. Topics include toxic hazards; noise; dusts, vapors and gases; biological hazards; radiation.

Planning studies: An introduction for non-planners to planning and practice in the New Zealand urban, rural and natural resource environment. Introduction to the principles of the Resource Management Act and its administration. The principles and procedures involved in making consent applications under the Act. Emphasis is placed on planning procedures at local authority level.

Contemporary management: A critical study of selected trends and recent developments in management theory, research and practice.

Project management: An introduction to the theory and methods employed in project management.

Implementation of information systems: A study of the implementation of information systems, involving high-level programming languages and commercial database systems. This study is combined with programming practice.

Information systems, organizations and E-commerce: A study of the organizational context within which

information systems are developed and used. It reviews the use of information systems from a user and manager's perspective.

Note(s): Student participation in the discussion forum is required. Internet links to course material are used from on-line teaching resources.

Digital multimedia: A study of the tools and methods used in the development of multimedia systems and their deployment on the web. The practical component involves using a range of professional editing and authoring software.

Note(s): Students will need access to a computer for this paper and access to relevant software. For more information please see the paper fact sheet located on the Department's Web-site <http://infosys.massey.ac.nz/> Social behavior and the police Social psychology: A survey of contemporary experimental social psychology. Against this backdrop critical perspectives are introduced with particular emphasis on the practice of discursive psychology in the New Zealand context.

Managing communications technology: A study of the theory and practice of the management of communications media, with particular reference to telecommunications and computer-based communication media.

Management development: A study of the managerial competencies associated with organizational effectiveness and the methods of developing these within organizations. The paper considers the roles of cognitive power, values, skill, experience and temperament in managerial performance.

Risk management I:

An overview of the principles and practice associated with risk identification, analysis and assessment.

Risk management II:

A detailed examination and critique of risk control methods.

Organizational psychology:

General principles of law relating to companies and partnerships.

Sociology of the environment:

An examination of how society and the environment are linked. The interrelationships between the environment, the economy, politics, social structure and values are considered.

Organizational communication:

This paper focuses on theory and research related to managing information flow in organizations. It considers a range of factors that influence communication in organizations.

Project in emergency management:

Study of a selected emergency management topic, generally with a research base, undertaken by the individual student under the supervision of academic and professional staff. The topic and method of study must be approved by the paper coordinator.

Natural hazards and resilient communities:

A study of natural hazards and the role of planning in building sustainable and disaster resilient communities develop and apply planning processes and tools to assess hazard vulnerability, reduce hazard risks, improve disaster readiness, develop effective response capabilities, and facilitate recovery.

Rehabilitation theory and practice:

Rehabilitation theory, process and practice in physical, social and vocational rehabilitation are examined. Models of rehabilitation are investigated in the light of various models of helping, service delivery, disability and disablement.

University of Canterbury, Christchurch

Country: New Zealand

Department /School: College of Science, Geological Sciences Department

Course: Post Graduate Diploma in Science (Hazard and Disaster Management)

Curriculum Description

Courses Offered in Curriculum

Year 1 semester 1

HAZM 401 Introduction to hazards and disasters (Geological Sciences):

The HAZM 401 course provides essential background concepts for a critical understanding of hazard and disaster management situations and practices. Although the course assumes no background in hazard management, topics such as natural system behavior and statistics will be used so some background in geomorphology or environmental science would be advantageous. Students lacking such background should discuss course standards and expectations further before enrolling unless they have a sound background in Engineering, Geology or Physical Geography.

The course deals with the nature of hazards and disasters – what they are, why they occur and why they are increasing. The relevance of science and engineering to understanding and managing hazards and disasters is discussed, as is the role of social and cultural understanding. Consideration of the limitations on management of hazards and disasters set by economic, institutional, social and cultural expectations leads to comparison of the potential for reducing death and damage from disasters by modifying both human and natural systems. The management of disasters, and recovery from them, is related to the intensity of the disaster and the degree of preparation of the affected communities. Case studies and exercises illustrate the points being made.

Learning Outcomes

Students successfully completing this course will:

- have a clear understanding of the basic terminology used in geohazard studies, particularly "hazard", "risk" and "disaster",
- be aware of current legislation in New Zealand impacting on hazard management policies and practices, have a clear overview of the physical processes of natural systems, as well as the associated hazards in terms of magnitude and frequency,
- understand the contribution of human systems to the occurrence of disasters,
- be familiar with case studies relating to a variety of hazards, and the disaster management implications,
- be able to carry out a hazard assessment within a specified geographic area, including being able to identify the principal natural processes and their potential impacts.

ENCI 601 Risk management (Civil Engineering): To develop a sound understanding of the concepts and techniques that support effective risk management, and an awareness of the contextual issues important to their application.

Risk Assessment is open to all post-graduate students in Engineering or Science, and to other disciplines on application. The course is also open for part-time enrolment and is a REQUIRED course for all students in the ME (Fire) program. As places on the course are limited, all students who wish to enroll in this course must make application (i.e., pre-enroll) by 9 JUNE 2006, otherwise they might not be considered.

Learning Outcomes

By the end of this course the student should:

- Have a clear overview of the full risk management process and how and why it is applied in practice.
- Be able to apply risk assessment techniques to assess and evaluate different types of risk.
- Develop an appreciation of the importance of uncertainties in risk evaluation and be familiar with techniques for managing uncertainty.
- Have an awareness of the social and ethical aspects of risk acceptability and how these influence effective communication about risk issues. This course will cover the following topics:
 Introduction to risk concepts: Societal vs. individual risk, Perceived, assessed vs. actual risk, Dimensions of risk, Risk identification
 Risk assessment: Data selection, Uncertainty and Sensitivity, Probability Distributions, Extreme value, theory, Monte Carlo simulation, Fault and Event Trees, Reliability theory
 Risk Evaluation & management: Scoring systems, HAZOP, HAZAN, FOSM, Utility theory, Risk appetite and risk acceptability, Ethical aspects of risk evaluation, Risk management strategies
 Risk Communication: Fairness and social distribution of risk, Risk perceptions, communicating risk concepts

Year 1 semester 2

HAZM 403 Hazard and disaster investigation (Geological Sciences): Supervised group projects that provide opportunities for students to become involved with real-life hazard management situations; obtain information; analyze problems and synthesize solutions; integrate scientific, societal, legal, institutional, environmental and political considerations; and consult and communicate outcomes. Hazard assessment, vulnerability assessment, disaster management planning and recovery from disaster. Seminars on aspects of hazard and disaster management.

The course utilizes knowledge gained from completing HAZM 401 on the nature of hazards and disasters. The investigation, synthesis and reporting in HAZM 403 require application of the material in HAZM 401 to real-life situations, and further require the student to seek, acquire, assimilate and use additional material from a variety of sources. Students are required to complete the projects both as individuals and also as groups, to gain experience of the benefits and difficulties of working in a team situation.

Staff will be available for appropriate advice and mentoring throughout the course; however the major benefit from the course is that students learn how to learn, by discovering that they have the ability to think through a novel situation and devise ways of solving problems on which they have not been instructed.

Learning Outcomes

Students successfully completing this course will:
 be experienced and confident in carrying out hazard and vulnerability assessments,
 know how to communicate with both experts and lay persons in hazard and disaster situations,
 know how to approach novel problems of hazard and disaster management,
 know how to assess information needs, and access and assess information from a range of sources world-wide,
 have experience in reporting hazard and disaster management situations and solutions.

Coventry University

Country: United Kingdom
 Department /School: Coventry Business School
Business Continuity Certificate/Diploma course Curriculum Description

This certificate/diploma has been designed with the assistance of the Education Committee of the Business Continuity Institute (BCI) with the purpose of enhancing the capability and professionalism of those working in Business Continuity. The diploma can be completed in one year but is available over two years.

Course content

The diploma course requires successful completion of two mandatory double modules. Each double module is the equivalent of 300 hours of student effort and requires attendance at Coventry University for two weeks (2 x 4.5 days) with four weeks between each session. The remainder is done as either distance learning or work-based projects that contribute to the assessment process. Typically the work-based projects will require between one day and 1.5 days of effort per week. The Certificate in Business Continuity Management can be awarded after the completion of the double module Business Continuity Planning to students who do not wish to continue and study for the diploma. Students who complete both double modules will be awarded the Diploma in Business Continuity Management.

Emergency Planning - Diploma course (Coventry Business School)

The Diploma in Emergency Planning requires you to complete four modules. All students must complete the double module 'Emergency Planning: Development Auditing and Review' and any combination of other core modules available to make a total of four in order for the Diploma to be awarded. The double module is the equivalent of 300 hours of student effort and requires attendance at Coventry University for three sessions normally made up of four days, three days and two days duration, with four weeks between each session.

Each single module equates to 150 hours of student effort delivered in two sessions typically in blocks of two or three days with at least four weeks in between. Approximately 40 hours will be contact time at the University, 50 hours per module of student effort will be by distance learning through focused assignments, and the remainder will be self-directed studies.

Entry requirements

You will be required to provide evidence to demonstrate potential ability to complete the course. This will include information on formal academic qualifications to demonstrate skills in numeracy and literacy such as GCSE passes in appropriate subjects. Alternatively, evidence of recent study and/or demonstrable prior experience in relevant fields will be taken into consideration.

Course content

The Emergency Plans module has been designed to provide the knowledge and skills to enable those new and existing emergency planners to operate effectively within their emergency planning role. The module covers the knowledge and skills to design, develop, review and implement a range of generic, site specific and subject related emergency plans. This will include how to design, plan and manage a range of suitable exercises to test emergency plans.

Health Emergency Planning-Certificate/Management-Diploma course (Coventry Business School)

The Certificate/Diploma in Health Emergency Management is open to all involved in, or seeking employment in, health emergency planning.

Course content

Certificate: for the award of Certificate in Health Emergency Management, you must complete the double module Health Emergency Planning. Completion of this double module without further progression entitles you to

the award of Certificate. The course has been designed to enable you to complete the module within the first two months of study. This double module has been designed to provide the basic skills and knowledge to enable those new or with little experience in emergency planning and incident management to operate effectively within their emergency planning role after only a short period of time. Diploma: For the award of Diploma in Health Emergency Management, you must first complete the mandatory double module 'Health Emergency Planning' followed by a module in Integrated Emergency Management and one other module from the selection of core modules. Each module equates to 150 hours of student effort. Approximately 40 hours will be contact time at the University, 50 hours per module of student effort will be by distance learning through focused assignments, and the remainder will be self-directed studies. For the mandatory double module, the time spent at Coventry University will be two weeks (2 x 4.5 days), with four weeks between each session. For the remainder of the Diploma programme, the time spent at Coventry University will be between four and five days per module, usually in blocks of two and three days with at least four weeks in-between each block of days.

Operational Management & Technical Support for Specialist Rescue Diploma course (Collaborative venture between Coventry Business School, Fire Service College and Outreach Organization)

This programme is one of a portfolio of courses within the area of Disaster Management. The portfolio has the broad aim of providing a comprehensive, challenging and sustainable set of programmes of study to serve the needs of students, employers and other stakeholders. The emphasis of this programme is upon enabling Fire and Rescue Personnel to achieve a recognised Search and Rescue (S&R) qualification to enhance their skills and professional capabilities and maximise their career potential both nationally and internationally.

In so doing, the programme serves the wider needs of national and local government and addresses current developments following September 11 2001 and responds to the inception of "New Dimension" initiatives introduced by the government aiming to improve the response of the rescue services to major incidents.

Course content

The programme is a collaborative venture between the University, The Fire Service College and the Outreach Organisation. Both of these organisations are current partners of the University in delivering courses and modules.

2) DISTANCE LEARNING & ONLINE DIPLOMA COURSES

Southern Cross University

Country: Australia

Department /School: School of Human Services

Course: Graduate Diploma in Community

Development/Emergency Management

Curriculum Description

The School of Human Services at Southern Cross University in Australia offers a post graduate program of study in Community Development/Emergency Management. At the graduate certificate, graduate diploma and master's levels, these programs are unique in that they offer emergency management studies from a community development perspective. This approach is aligned with the United Nations current strategic direction towards disaster mitigation through community development rather than a merely logistics-based response focus.

This program offers students the opportunity to look beyond the "how to" approach and considers the community itself as fundamental not only to appropriately responding to disasters but as integral to emergency management planning. The program is tailored specifically to online delivery. Students, being located in many and varied locations around the world, have the opportunity to network and "chat" with others currently working "at the coal face" of emergency management and community development on a global level. The programs are offered on a trimester basis, with entry points in January, May, and August.

Courses Offered in Curriculum

BHS00360: Perspectives of Community Development

Provides students with an overview of the contextual and theoretical elements of Community Development. Approaches to community development will be critically analyzed using the contextual and theoretical elements and apply the process of community development to a variety of settings.

BHS00361: Political, Economic and Cultural Aspects of Community Development

Students will explore their personal values and beliefs as they impact on the process of community development. They will explore in depth the political processes and influences on communities, as well as economic influences within a social development framework. Culture within the community will be examined.

BHS00362: Community Education

Provides students with an overview of learning theories and educational strategies as they apply to community education. The unit explores the various educational roles as they relate to community educational needs.

BHS00363: Issues in Disaster Management

A number of major issues in contemporary emergency management are covered in this Unit that is a foundation for the rest of the course which has a more specific community development orientation. The Unit provides a broad outline of the nature of disasters, response, recovery, preparedness and mitigation from an international perspective.

BHS00364: Disaster Preparedness and Prevention

Provides a foundation understanding and practical application of planning for disaster preparedness by communities. The Unit examines international practice in community disaster planning processes, the theory and practice of community preparedness, and how to prepare an effective disaster plan.

BHS00365: Living in a Hazardous Environment

Provides a detailed understanding of most of the known natural and human made hazards that can lead to disasters and major emergencies. The Unit then examines the principles and practice of mitigation for a number of local and international hazards.

BHS00366: Social Dimensions of Disasters

Provides a detailed analysis of the sociological and psychological aspects of disasters and disaster preparedness in individuals, communities and organizations.

BHS00367: Analytical Methodologies in Emergency Management

Provides the student with a range of methods for the evaluation of current research and for the conduct of evaluations of disaster preparedness programs. A number of qualitative and quantitative approaches to evaluation are examined as well as current examples of evaluation studies in emergency management

Swinburne University of Technology, Melbourne

Country: Australia

Department /School: School of Human Services
Course: Graduate Diploma of Emergency and Disaster Management

Courses Offered in Curriculum
Curriculum Description

The Graduate Diploma of Emergency and Disaster Management have been developed to meet the training needs of the strategic planners in emergency services, industry and communities. It will build upon the framework established in the Graduate Certificate in Emergency and Disaster Management and will develop depths of knowledge and planning skills in specific areas such as logistics, evacuation and the review of emergencies and disasters. This will allow students to develop an applied strategic approach to emergency management. To complete the Graduate Diploma students will undertake a supervised project within an industry setting to allow them to apply their skills and knowledge.

The course provides participants with a regional, national and international perspective on disaster management, based around the Australian/New Zealand standard on Risk Management (AS/NZS 4360:2004). This is a postgraduate course accredited by Swinburne University of Technology and delivered by Swinburne's TAFE Division. All graduates will receive a Swinburne University of Technology award.

Course Structure:

The Graduate Diploma in Emergency and Disaster Management can only be commenced after completion of the four core units of the Graduate Certificate in Emergency and Disaster Management. The Graduate Diploma in Emergency and Disaster Management has a nominal duration of one semester of full-time study, per unit. In addition to the four core units of the Graduate Certificate in Emergency and Disaster Management, students must complete the one core unit plus three of the elective units of the Graduate Diploma.

Students may enrol into the Graduate Diploma of Emergency and Disaster Management at the commencement of their studies in these graduate programs. If they only complete the requirements of the Graduate Certificate, they may exit with this qualification. Students cannot graduate with both the Graduate Certificate and the Graduate Diploma unless there is a break of one semester between the two qualifications.

Entry Requirements:

A degree or advanced diploma from a recognized tertiary institution (or approved equivalent). Applicants with relevant work experience are also eligible to apply, particularly where relevant professional practice has been undertaken. In these cases it is expected that the intending participants will be able to:

Work independently

Consult with others

Manage time and commitments

Research material from primary and secondary sources

Present written information appropriate for postgraduate assessment.

Core Subjects

The four units in the Graduate Certificate of Emergency and Disaster Management

SEDM05 Emergency and Disaster Management Research Project

SEDM01 Introduction to Emergency and Disaster Management

SEDM02 Emergency and Disaster Risk Management Process

SEDM03 Consequences of the Impact of Hazards

SEDM04 Working with Communities

Electives Choose 3

SEDM06 Project Management

SEDM07 Recovery Management

SEDM08 Logistics Planning and Management

SEDM09 Evacuation Management

SEDM10 Emergency and Disaster Management Evaluation

University of Wisconsin, Madison

Country: United States of America

Department /School: Disaster Management Centre

Course: Disaster Management Diploma Program

Curriculum Description

In 1994, as part of its ongoing commitment to professional development in disaster/emergency management, the UW-DMC established the Disaster Management (DM) Diploma. This is a personal study program which can combine UW-DMC self-study courses with courses from other organizations anywhere in the world.

Since 1994, the UW-DMC has registered Diploma candidates from these countries: Argentina, Australia, Austria, Bahamas, Belgium, Burundi, Canada, Chile, Colombia, Costa Rica, Denmark, El Salvador, Ethiopia, Georgia, Ghana, Guatemala, Guyana, India, Israel, Italy, Korea, Japan, Kenya, Malawi, Mexico, Netherlands, New Zealand, Norway, Saudi Arabia, Somalia, Sri Lanka, Spain, Switzerland, Tanzania, Trinidad & Tobago, Turkey, Uganda, United Kingdom, United States, Venezuela, Yugoslavia, Zambia.

Categories

The DM Diploma Program's four curriculum categories can assist you in formulating your program of studies. A DM diploma curriculum can combine studies in all four categories. These four educational divisions provide the structure for the DM Diploma Program.

Professional updating (not more than 12 CEU) to review disaster/emergency management fundamentals

Professional advancement (at least 30 CEU) to explore professional and technical sector developments in which you have limited background and/or to increase your skills in areas of current sectoral responsibility

Professional electives (not more than 25 CEU) to increase capabilities for assuming new job responsibilities, including administrative, managerial, financial and sectoral areas new to you

Outside interests (not more than 10 CEU) to broaden your perspective on the role of disaster/emergency management in the environmental, political, cultural and social contexts

The Disaster Management Diploma Program at the University of Wisconsin has been designed for practicing disaster/emergency management professionals throughout the world. The DM Diploma Program allows the diploma candidate to combine traditional undergraduate and graduate college courses with a variety of continuing education programs—institutes, short courses, independent study, correspondence, and telecommunications courses.

Courses Offered in Curriculum

Aim and Scope of Disaster Management

A basic UW-DMC course that defines the scope and objectives of the field of disaster management, looks at concepts and terms, differentiates between natural disaster assistance and refugee operations, examines tools and methods, and looks at some technology appropriate to the field. The self-study course consists of five lessons with self-graded examinations and one university-graded examination.

Principles of Management

A basic UW-DMC course that provides an overview of management from a disaster and emergency standpoint, looking at issues such as program planning, decision making, information management, program supervision, monitoring and control, personnel, and leadership. It also examines issues such as motivation, group dynamics, managing work groups, structure and organizations, and criteria for addressing a program. The self-study course consists of 15 lessons with self-graded examinations and one university-graded examination.

Natural Hazards: Causes and Effects

A basic UW-DMC course that examines in detail the physical characteristics, geographic distribution, impact, response, and mitigation of natural hazards such as earthquakes, tsunamis, volcanoes, tropical cyclones, floods, drought, desertification, and deforestation. The self-study course consists of nine lessons with self-graded examinations and one university-graded examination.

Disaster Preparedness

A look at the prerequisites for preparedness planning, action plans and procedures, training issues and models, preparedness roles and responsibilities, public awareness and warnings, as well as providing preparedness action plans and checklists. The self-study course consists of eight lessons with self-graded examinations and one university-graded examination.

Damage and Needs Assessment

An examination of common approaches to disaster assessment and a look at assessment teams, survey methods, tools, and techniques. The course covers procedures for handling emergency supplies and services, housing, agriculture, lifelines, and droughts and famines, including the establishment of surveillance systems after a disaster. The self-study course consists of 12 lessons with self-graded examinations and one university-graded examination.

Disaster Response

A look at disaster-response planning, roles and responsibilities, initial emergency operations, emergency operations by sector, emergency operations support and management, and recovery and rehabilitation. The self-study course consists of 10 lessons with self-graded examinations and one university-graded examination.

Environmental Health Management after Natural Disaster

A look at the effects of natural disasters on environmental health, at pre-disaster health measures, at measures to be taken during the disaster and in the aftermath, and at rehabilitation measures. The course also examines factors to consider for effective management. The self-study course consists of five lessons with self-graded examinations and one university-graded examination.

Health Services Organization in the Event of Disaster

A look at the organization of first-level care at the disaster site, rural health services for disaster situations, the implementation of a disaster plan in a health care facility, and methods for updating and evaluating hospital disaster management plans. The self-study course consists of seven lessons with self-graded examinations and one university-graded examination.

Emergency Health Management after Natural Disaster

An overview of the effects of disaster on health and an examination of the issues in disaster preparedness, coordination of national relief activities, the management of mass casualties, and epidemiologic surveillance and disease control. Topics such as food and nutrition, temporary settlements, communications and transport, management of health relief supplies, management of international relief assistance, and the re-establishment

of normal programs are also covered. The self-study course consists of 12 lessons with self-graded examinations and one university-graded examination.

Epidemiologic Surveillance after Natural Disaster

An overview of risk factors for communicable diseases after disasters, a look at post-disaster potential for communicable disease epidemics, and an examination of methods for setting up systems for the surveillance of communicable and selected non-communicable diseases. The operational aspects of the control of communicable diseases after disasters are also covered. The self-study course consists of five lessons with self-graded examinations and one university-graded examination.

Emergency Vector Control after Natural Disaster

A look at three broad areas: disaster preparedness, control measures for specific vectors, and general control actions. The course examines issues such as contingency plans, vector- and rodent-related diseases, program management, pesticides and pesticide application, surveillance, and evaluation. This self-study course consists of 14 lessons with self-graded examinations and one university-graded examination.

Disasters and Development

This course introduces the relationship between disasters and development. This idea has grown within the development community and forms the basis for the United Nations Disaster Management Training Program (DMTP). You will learn about the different economic impacts of disasters caused by different hazards, the methods and tools for analyzing potential investment decisions in hazard-prone areas and the mitigation benefits of alternative development strategies. The course will also explore environmental management, sustainable development and the roles of communities, governments, non-governmental organizations and the United Nations in promoting development in the context of disasters. The self-study course consists of five lessons with self-graded examinations and one university-graded examination.

(2) UNDERGRADUATE LEVEL CURRICULUM WORLD WIDE

1) PART I-ON CAMPUS COURSES

Brandon University, Manitoba Country: Canada

Department /School: Department of Applied Disaster and Emergency Studies

Course: B. Sc or BA in Applied Disaster and Emergency Studies Emphasis in Emergency Management

Curriculum Description

The Applied Disaster and Emergency Studies (ADES) program at Brandon University leads either to a Bachelor of Science (B.Sc.) in Applied Disaster and Emergency Studies. Disaster Science concentration or to a Bachelor of Arts (B.A.) in Applied Disaster and Emergency Studies. Planning and Management concentration. The Disaster Science concentration will provide students with a solid theoretical and applied foundation in the natural sciences, emphasizing elements of modern society and the environment as it pertains to risks, disaster and emergency processes and responses. The Planning and Management concentration will focus on organizational, and resource planning and management. Students must complete 120 credit hours of instruction (75 credit hours from the required Core Curriculum courses, 18 credit hours selected from the specific concentration grouping, and the remaining 27 credit hours to meet the Liberal Education Requirements and to fulfill prerequisites of the courses listed below).

Courses Offered in Curriculum:

Year 1: Required Core : Foundation of Hazards and Disaster Studies (3), Conceptual and Applied Issues in Disaster Studies (3), Environmental and Resource

Issues(3) ,Weather and Climate (3) ,Introduction to Physical Geography (3) ,Social Institutions and Processes (3) ,Introduction to Psychology (3) , general Psychology (82.161) ,Written Expression: Structure Substance, Style (3)

Year 2: Required Core : Emergency Planning and Management (3) ,Natural Disasters: Causes and Physical Dynamics (3), Hazards and Risk Assessment (3) ,Our Dynamic Earth (3) ,Introduction to Information Technology (3) ,Introduction to Geographical Information Systems (3) ,Organizational Psychology I (3) ,Organizational Psychology II (3)

Years 3 and 4: Required Core : Environmental Health (3), Emergency Preparedness and Response (3), Organizational Response to Disasters and Emergencies (3), Environmental Disasters: Appraisal and Responses (3), Conflict Resolution (3), Disasters and Development: Planning and Policy Issues (3), Environmental Disaster/Emergency Practicum (6)

Disaster Science Concentration courses: Introduction to Hydrology (3) ,Flood Modeling (3) ,Applied Hydrology (3) ,River Mechanics (3) Mathematical Modeling (3), Pollution Biology (3) ,Hazardous Waste Materials and Emergencies (3),General Chemistry (3), Inorganic Chemistry (3) ,Introduction to Geochemistry (3) Environmental Geology (3), Groundwater-An Introduction to Hydrogeology (3), Biology (3) ,Biology II (3), General Ecology (3) ,Computer Cartography (3), Remote Sensing: Air Photo Interpretation (3) ,Advanced Remote Sensing (3), Advanced Geographical Information Systems (3)

Planning and Management Concentration courses: Social Psychology (3) ,Environmental Psychology (3) ,Personality: Abnormal (3) ,Group Processes and Dynamics (3) ,Community Psychology I (3) Community Psychology II (3) Human Resource Management (3) ,Management (3) Compensation Management (3) Forecasts of the Future (3) Social Planning (3),Environmental Ethics (3) Economics and the Environment (3) Economics and Natural Resources (3) Benefit-Cost Analysis (3) Contemporary Political Issues (3) Government and Politics of Canada (3) Provincial Government (3) Judicial Administration in Canada (3) Canadian Constitutional Law (3) Law and Society (3) .

University College of Cape Breton/Atlantic Institute for Infrastructure Protection

Country: Canada

Department /School: Department of Engineering/ School of Science and Technology

Course: Bachelor of Technology in Emergency Management

Curriculum Description

The University College of Cape Breton, and the Atlantic Institute for Infrastructure Protection are now offering the Degree of Bachelor of Technology in Emergency Management. The degree is administered through the Department of Engineering, within the School of Science and Technology at the University. Students must have at least three years of university or college level courses or equivalent professional or work experience to qualify for admission. The post-diploma/degree program consists of the following courses:

Courses Offered in Curriculum

Introduction to Disaster Management

This course provides an introduction and overview of emergency management organization in the public and private sectors. Students will develop an understanding of disaster decision-making at all levels in an organization.

Disaster Preparedness Response

The student will cover topics for public safety officials. Different types of emergencies and an approach to planning that can be applied to emergency situations will be studied. This course will emphasize the Canadian system of emergency management and response and will contrast this system with the one in the United States. Learning of the Canadian Doctrine will be a course priority.

Business and Industry Crisis Management

The course is divided into two parts. The first part will introduce the student to the need for business and industry emergency management and business continuity principles. Distinction with government as well as similarities will be studied in depth. The second part will concentrate on the use of technology to manage emergencies.

Hazardous Materials Management & Mitigation

An understanding of biological, chemical, Electro-magnetic and radiological materials pose special hazards. This course will provide information and analysis of the effects of these materials when released. The role of mitigation during the recovery process will be studied.

Operational Recovery

The relief and recovery operation in any disaster is an element that must be thoroughly understood by the practitioner. Recovery planning will be studied as well as the psychological, sociological, political and economic considerations.

Practice and Procedures for the Incident Commander/Site Manager

Public policy issues as they effect emergency management including disaster legislation in the United States and Canada will be studied. Emergency command system/emergency operations center will be developed and the models of emergency operation will be developed.

Terrorism and Emergency Management

Terrorism has the potential to be the most serious of manmade disasters. This course gives the student a background in the history of terrorism in Canada and the United States as well as introducing the student to the psychological dimensions. Hazard analysis, risk assessment and structural and nonstructural strategies will be learned.

All courses are required core, "full-year" courses and extend over two semesters. All courses will be given over the Internet only and do not require attendance at the University. At least one of the courses is planned to commence each September, each January and each May. A summative scenario experience is being considered and may be required for graduation with the degree.

University Of Canterbury, Christchurch

Country: New Zealand

Department /School: Geological Sciences Department College of Science

Course: Bachelor of Science honors (Hazard and Disaster Management)

Curriculum Description

Courses Offered in Curriculum

HAZM 401 Introduction to hazards and disasters (Geological Sciences)

The HAZM 401 course provides essential background concepts for a critical understanding of hazard and disaster management situations and practices. Although the course assumes no background in hazard management, topics such as natural system behavior and statistics will be used so some background in geomorphology or environmental science would be

advantageous. Students lacking such background should discuss course standards and expectations further before enrolling unless they have a sound background in Engineering, Geology or Physical Geography.

The course deals with the nature of hazards and disasters – what they are, why they occur and why they are increasing. The relevance of science and engineering to understanding and managing hazards and disasters is discussed, as is the role of social and cultural understanding. Consideration of the limitations on management of hazards and disasters set by economic, institutional, social and cultural expectations leads to comparison of the potential for reducing death and damage from disasters by modifying both human and natural systems. The management of disasters, and recovery from them, is related to the intensity of the disaster and the degree of preparation of the affected communities. Case studies and exercises illustrate the points being made. Students successfully completing this course will:

- have a clear understanding of the basic terminology used in geohazard studies, particularly “hazard”, “risk” and “disaster”,
- be aware of current legislation in New Zealand impacting on hazard management policies and practices,
- have a clear overview of the physical processes of natural systems, as well as the associated hazards in terms of magnitude and frequency,
- understand the contribution of human systems to the occurrence of disasters,
- be familiar with case studies relating to a variety of hazards, and the disaster management implications,
- Be able to carry out a hazard assessment within a specified geographic area, including being able to identify the principal natural processes and their potential impacts.

ENCI 601 Risk management (Civil Engineering)

To develop a sound understanding of the concepts and techniques that support effective risk management, and an awareness of the contextual issues important to their application. Risk Assessment is open to all post-graduate students in Engineering or Science, and to other disciplines on application. The course is also open for part-time enrolment and is a REQUIRED course for all students in the ME (Fire) program. As places on the course are limited, ALL STUDENTS who wish to enroll in this course MUST MAKE APPLICATION (i.e., pre-enroll) by 9 JUNE 2006, otherwise they might not be considered. By the end of this course the student should:

- Have a clear overview of the full risk management process and how and why it is applied in practice.
- Be able to apply risk assessment techniques to assess and evaluate different types of risk.
- Develop an appreciation of the importance of uncertainties in risk evaluation and be familiar with techniques for managing uncertainty.
- Have an awareness of the social and ethical aspects of risk acceptability and how these influence effective communication about risk issues.

This course will cover the following topics:

Introduction to risk concepts Societal vs. individual risk, Perceived, assessed vs. actual risk, Dimensions of risk, Risk identification

Risk assessment :Data selection, Uncertainty and Sensitivity, Probability Distributions, Extreme value theory, Monte Carlo simulation, Fault and Event Trees, Reliability theory,

Risk Evaluation & management :Scoring systems, HAZOP, HAZAN, FOSM, Utility theory, Risk appetite and risk acceptability, Ethical aspects of risk evaluation, Risk

management strategies,

Risk Communication: Fairness and social distribution of risk, Risk perceptions, Communicating risk concepts

Year 1 semester 2

HAZM 403 Hazard and disaster investigation (Geological Sciences)

Description

Supervised group projects that provide opportunities for students to become involved with real-life hazard management situations; obtain information; analyze problems and synthesize solutions; integrate scientific, societal, legal, institutional, environmental and political considerations; and consult and communicate outcomes. Hazard assessment, vulnerability assessment, disaster management planning and recovery from disaster. Seminars on aspects of hazard and disaster management.

The course utilizes knowledge gained from completing HAZM 401 on the nature of hazards and disasters. The investigation, synthesis and reporting in HAZM 403 require application of the material in HAZM 401 to real-life situations, and further require the student to seek, acquire, assimilate and use additional material from a variety of sources. Students are required to complete the projects both as individuals and also as groups, to gain experience of the benefits and difficulties of working in a team situation.

Staff will be available for appropriate advice and mentoring throughout the course; however the major benefit from the course is that students learn how to learn, by discovering that they have the ability to think through a novel situation and devise ways of solving problems on which they have not been instructed.

Learning Outcomes

Students successfully completing this course will:

- be experienced and confident in carrying out hazard and vulnerability assessments,
- know how to communicate with both experts and lay persons in hazard and disaster situations,
- know how to approach novel problems of hazard and disaster management,
- know how to assess information needs, and access and assess information from a range of sources world-wide,
- have experience in reporting hazard and disaster management situations and solutions.

Coventry University

Country: United Kingdom

Department /School: School of Science and the Environment

Course: BSc (Honors) International Disaster Engineering and Management

BSc (Honors) Development and Health in Disaster Management

BA (Honors) Emergency and Disaster Management

BSc (Honors) Environmental Hazards and Disaster Management

Curriculum Description

The focus of this program is Disaster Management and Emergency response within a developed world context. It aims to equip graduates with the skills needed to practice disaster mitigation, preparedness, response and long-term recovery activities within a complex technological society such as the UK. The degree program also seeks to produce graduates with problem solving, management and communication skills essential for the co-ordination of complex situations following technological and natural disasters. You will investigate operational and crisis management and case studies are used to illustrate the principles and practice of Emergency and Disaster Management.

Students may have the opportunity to undertake a professional placement year. This course has been designed to enable direct entry to the second year for students who have achieved a good HND in public services. This enables HND students to progress to a BA Honors degree with two years of further study. The course is modular with eight modules per year and will normally be taken over three years. The opportunity exists for you to incorporate a sandwich placement year to gain relevant work experience. A number of UK placements have been arranged for students including a number with government agencies.

Courses Offered in Curriculum

BSc Honors degree in Disaster Management and Engineering

The Disaster Management and Engineering degree course aims to equip graduates with the skills needed to practice both nationally and internationally in disaster mitigation, preparedness, response and long-term reconstruction of disaster affected communities. You will require 5 GCSEs at grade A-C including Mathematics and English Language and 260 Tariff points or equivalent qualifications. Applicants with HND Engineering may be considered for direct entry to second year. Topics covered by this course include construction management, surveying, water supply and sanitation and storm water management. These are taught in the context of international humanitarian aid programs.

BSc Honors degree in Disaster Management

The Disaster Management BSc course is designed to address the needs of the rapidly emerging discipline of Disaster Management. It aims to equip graduates with the skills needed to practice both nationally and internationally in disaster mitigation, preparedness and response. You will require 5 GCSEs at grade A-C including Mathematics and English Language and 260 Tariff points or equivalent qualifications. This degree develops problem solving, management and communication skills that are needed to develop a successful career with one of the many organizations working in disaster management. You will study the phases within the cycle of disaster management and the role of the government, international agencies and non-government organizations operating in disaster management allows students to choose a theme to study, for example options may include languages, development studies, Geographical Information Systems or International Relations.

BA Honors degree in International Security & Disaster Management

Events such as the 'Twin Towers' and the Bali bombing, famine and conflicts in many parts of the world, the consequential displacement of large numbers of people from their homes and the threat to world peace and stability has resulted in a growing international interest in issues of global safety and security. Even more recently, natural disasters such as the Tsunami in Asia have focused attention on issues of global safety and security that relate to the human and social consequences of such disasters transcending national boundaries. This course aims to provide students with the opportunity to study contemporary issues surrounding global safety and security and to combine these studies with the wider study of 'Disaster Management' to provide a unique and intellectually challenging course of study. Graduates will study and gain an understanding of relevant political, cultural, social and human issues but at the same time will be equipped with the skills needed to practice both nationally and internationally in disaster mitigation, preparedness, response and long-term social, psychological and physical reconstruction of disaster

affected communities. 5 GCSEs at grade A-C including Mathematics and English Language and 280 Tariff points or equivalent qualifications.

American Military University, USA

Country: United States America

Department/School:

Course: Bachelor of Arts in Emergency and Disaster Management

Curriculum Description

In the homeland security area, there is considerable discussion about concepts such as all-hazards approach, emergency and disaster management, risk prevention and management, counter-terrorism, consequence management and consequence mitigation, and others. Educators are still grappling with what makes up the various applied and research fields of study, and what are the academic disciplines inherent in this emerging field.

Clear and definitive guidelines have not yet evolved in this emerging field and it is clear the subject is complex in theory and practice. The immaturity of the field prevents consensus and accepted standards from emerging. The fully developed degree program at APUS prepares students for the complexities of this field, along with preparation in a number of areas across the homeland security and emergency management spectrum. In its degree programs, APUS takes an integrated approach that reflects this discipline in its current emergency state.

Degree Program Objectives

In addition to the institutional and general education level learning objectives, the Bachelor of Arts in Emergency and Disaster Management also seeks the following specific learning outcomes of its graduates. With reference to each of the respective areas of emergency and disaster management, graduates in this degree program will be able to:

Identify and apply the disaster planning and management cycle from mitigation through recovery.

Courses Offered in Curriculum

Introduction to Meteorology

Introduction to Meteorology covers the fundamental principles governing the behavior of our atmosphere and the duties and methods of the professional meteorologist. Students will gain insight into the exciting discipline of meteorology, discussing topics such as cloud formations, movement in the atmosphere, thunderstorms, tornadoes, and meteorology satellites. Concurrent enrollment in SC127 is required.

Meteorology Lab

This lab will take the student deeper into the aspects of our weather through the study and exploration of our atmosphere via an interactive CD-ROM. Topics to be discussed range from cloud formations, and aspects of weather to hurricanes and severe weather situations. The CD-ROM based lab increases the student's awareness of our planet through hands on activities. Concurrent enrollment in SC107 is required.

Emergency Planning

Effective emergency planning is the key to surviving natural and man-made disasters. Risk analysis and the formulation of a comprehensive plan, followed by a vigorous and continuing testing program, are essential elements to surviving an emergency. Topics covered include threat assessment, risk analysis, formulating the plan, staffing the emergency operations center (EOC), coordinating with supporting agencies, and the importance of continuing liaison, managing an actual incident, and conducting an effective follow-up analysis. Various actual case studies are discussed.

Natural Disaster Management

This course addresses the planning, recovery, and response system in place in the United States for natural disasters. The course covers issues of organization, operations, training, and other issues associated with the management of natural disasters.

Special Operations in Emergency Medical Services

This course deals with the specialized issues associated with emergency medical services—those issues that are not commonplace or part of everyday procedure. Topics include emergency medical services in mass casualty, biological, chemical and radiological incidents. The course also covers unique topics in emergency medical services, to include the employment of services in complex contingencies, such as those faced when fire, police, terrorist, and other emergencies co-exist with the need to provide medical services on-scene and post-disaster.

Emergency and Disaster Incident Command

This course is a study of the theory and practice of incident command, the various methods of incident command, and specific focus on the Incident Command System (ICS) used in crises, disasters, and emergency management response systems. Cases are studied in order to assist students in understanding the management and leadership complexity associated with modern emergencies and disasters.

Consequence Management

This course addresses the potential results from nuclear, biological, and chemical incidents or uses. Topics include public health consequences of such incidents, emergency planning and response measures in place among U.S. agencies, and emerging detection and management technologies. Existing vulnerabilities to these types of incidents and attacks will also be discussed. Objectives of the course include identification of the historical development and use of chemical and biological weapons; definition of the types of chemical and biological weapons and their impacts; analysis of case studies related to the development and use of chemical and biological weapons, and research on chemical and biological warfare.

Public Policy

Analyzes the formulation and execution of public policy in America. Includes study of decision-making theory, bureaucratic politics and other models that seek to explain how policy is made. Issues explored include social, environmental, economic, homeland security, defense, and foreign policy. Additional issue areas may be covered depending on contemporary significance.

Psychology of Disaster

This course focuses on the psychological and physiological human response to natural and man-made disasters. Using clinical research and case histories, students will examine normal and abnormal psychological reactions, the recovery process and principles of mental health care for victims of mass disasters. Differences between natural and man-made disasters are examined and factors that mitigate post-traumatic effects are reviewed. Psychological aspects of Weapons of Mass Destruction (WMD) disasters are also considered.

Homeland Security Organization

This course is a study of federal, state, local, private, and other organizational entities involved in homeland security. It addresses the evolution of homeland security from early to modern times with an emphasis on the emerging homeland security structure, culture, and organization.

Border and Coastal Security

This course is a study of the federal, state and local organizations involved in border and coastal security,

associated homeland security issues, the various policy and operational strategies used for border and coastal access and security, and contemporary border and coastal security concerns. Topics also include immigration and non-U.S. approaches to border and coastal security.

Emergency Response to Terrorism

This course is a study of the emergency response to terrorism process, to include knowledge of response tasks, toxicology, mass casualty triage, decontamination, and other operational issues.

Chemical, Biological, & Radiological Hazards

This course for the non-scientist is a study of chemical, biological, and radiological science involved in the different forms of weapons of mass destruction. The course covers topics of basic science, treatment, short- and long- term effects, among other issues central to understanding hostile WMD agents.

Risk Communications

This course examines media management during local/national disasters and/or events. It will also address the media and all levels of governmental response. The focus will be on actual operations and on-site issues.

Port Security

Port Security is a survey course designed to provide students with a broad knowledge of port security issues. It will examine the critical importance of ports to trade and their vulnerability to disruption and attack. It will also examine several contemporary issues, including; the importance of sea borne trade to the North American and United States economies, the value of mega ports to sea borne trade, the vulnerabilities of ports to disruption and asymmetric attack, critical port security incidents such as the Halifax Explosion, and defensive measures to protect ports from disruption or asymmetric attack.

Senior Seminar in Emergency and Disaster Management

This senior capstone course allows students majoring in emergency and disaster management to analyze specific program related issues and problems using the knowledge and understanding gained by completing the required courses in the program and a significant number of the major courses. This is a capstone course to be taken after all other Emergency & Disaster Management courses have been satisfactorily completed. Students must have submitted a graduation application and have been cleared by the graduations department prior to registering for this course

California University of Pennsylvania

Country: United States of America

Department: Department of Earth Sciences

Course: BA in Geography with Geographic Information Sciences and Emergency

Management Concentration

Curriculum Description

California University of Pennsylvania is offering a Bachelor of Arts in Geography with a Concentration in Geographic Information Sciences (GIS) and Emergency Management. The GIS and Emergency Management concentration will prepare students for continued studies in graduate school or employment in governmental and private sector emergency management positions, with disaster relief organizations or with the Department of Homeland Security. The program is designed to give students the basic information in emergency management concepts and techniques and is supplemented by courses combining geographic knowledge with advanced technological information in remote sensing, hazards research, and advanced geographic information systems.

Program Objectives

Hands-on field experience in the laboratory and other appropriate settings.

A basic knowledge of the equipment and tools necessary in this field

Applications of essential GIS and emergency management concepts and techniques.

Courses Offered in Curriculum

Introduction to Geography, Climatology Geographic, Information Systems, Geographic Information Systems 2 ,Crime Mapping and Spatial Analysis, Impacts and Sustainability of Tourism, Demographic Analysis, Natural Hazards, Emergency Management, Disaster Vulnerability Assessment, Developing the Master Plan, Two Elective Courses (Internship Recommended).

Eastern Michigan University USA

Country: USA

Department /School: Political Science Department, College of Arts and Science

Course: BSc Degree in Public Safety Administration with Emergency Management Concentration

Curriculum Description

Courses Offered in Curriculum

Public Safety Administration Group – 18 Credit Hours

Planning and Decision-Making for Public Safety

Public Relations and Public Safety

Personnel for Public Safety Managers

Budgeting for Public Safety Managers

Managing Public Safety Agencies

Seminar in Public Safety Administration

Area Concentration – 15 Credit Hours

Students must SELECT FIVE courses from the list below

Police in Modern Society

Weather

Severe and Unusual Weather

Emergency Preparedness

Issues in Emergency Preparedness

Natural Hazard Mitigation

Arson Investigation

Hazardous Materials

Incident Command

Current Trends in Emergency Management

Managing Correctional Agencies and Facilities

East Tennessee State University

Country: United States of America

Department /School: Department of Public and Allied health, Department of Environmental Health)

Course: Emergency/Disaster Response Management

Undergraduate Minor

Curriculum Description

East Tennessee State University is offering an Emergency/Disaster Response Management Undergraduate Minor. There has been an increased emphasis on public protection since the terrorist attack on September 11, 2001. The U.S. Department of Health and Human Services has proposed a five year plan for combating bioterrorism designed to strengthen the nation's preparedness for possible terrorist acts. This has created a need for health professionals and citizen volunteers trained in emergency response management. The Emergency/Disaster Response Management Training minor is designed to prepare individuals how to respond during natural disasters and other emergency situations. The student will be able to use this training in their careers and/or as volunteers in the community.

Courses Offered in Curriculum

PEXS 2950 Disaster Response Training

Prerequisite(s) Completion of PUBH 2030 or permission of instructor. This course will introduce students to

service-learning and leadership through the Disaster Response Training program of the American Red Cross. Service projects selected to enhance the classroom components of this course will be required and, if such an event should arise during the course, an opportunity to respond to an actual emergency or disaster will also be included. Students completing this course will be eligible to serve as members of the RESPONSE - ETSU cadre and as American Red Cross Disaster Response Volunteers.

ENVH 3500 Environmental Safety

Considers the principles and practices of environmental health and safety in natural bathing places, swimming pools, campsites, day nurseries, parks, schools, colleges, and industry.

ENVH 4207/5207 Radiological Health

Prerequisite(s) CHEM 1110/11 or permission of instructor. The basic principles and procedures pertaining to the safe control of all common sources of ionizing radiation and the causes, effects, and control of radiation are included. The laboratory experiments include safety monitoring, radiation detection, and the use of survey meters.

PUBH 1010 Personal Health

Examines physical, mental, and social aspects of health utilizing topics such as communicable and chronic diseases, sexuality, consumerism, community health, environment, aging, death and dying, and the health care system.

PUBH 2030 First Aid & Emergency Care

Prepares the student providing knowledge and skills to handle emergency situations when emergency care is needed and medical assistance is delayed. Cardiopulmonary resuscitation (CPR-BLS) is taught in association with the course.

PUBH 3010 Accident Prevention

Examines unsafe personal acts and unsafe conditions influencing the occurrence of accidents. Emphasis is placed on the prevention of accidents through reducing human error and modifying unsafe environments.

PUBH 4030 Community Health

Prerequisite(s) PUBH 1010 or ENVH 1800; or permission of instructor. Studies and analyzes community health problems and their causes. The organization, administration, and work of agencies involved with community health are explored, with emphasis on the professional's responsibility for community health.

Jacksonville State University, Alabama

Country: United States of America

Department /School: Institute of Emergency Preparedness

Course: Bachelor of Science in Emergency Management with a minor in Homeland Security

Curriculum Description

Jacksonville State University offers a Bachelor of Science in Emergency Management. The degree program is designed to prepare students for emergency management careers in the public, private, and voluntary sectors. The interdisciplinary curriculum blends theoretical perspectives with professional practice, and emphasizes application of knowledge to practice settings. A total of 128 semester hours are required, with 30 required hours in the major. JSU offers both online and on-campus courses. All requirements for the degree can be met through distance learning. JSU extends in-state tuition rates for all online emergency management students.

Courses Offered in Curriculum

Introduction to Disaster Management

Overview of issues related to disaster management including a history of the field, key legislation impacting the field, comprehensive emergency management and integrated emergency management, and current issues in the field.

Disaster Mitigation & Preparedness

Methods and techniques used to lessen the potential impact of disasters. Approaches related to policy, sustainability, public education, disaster exercises, programming, and the built environment are all considered.

Populations at Risk

Documents and analyzes the social construction of vulnerabilities to disaster. Methods to reduce vulnerabilities and build local capacity are covered.

Disaster Response & Recovery

Covers how people, groups, organizations, communities and governments manage disaster in the immediate aftermath and long-term including social, physical, business, and infrastructure problems as well as intra and inter-organizational issues.

Emergency Management Capstone course

Prerequisite Senior Standing in Program. Integrates prior coursework in an applied and experiential framework through case studies, exercises, applied research, and analytical activities.

Research in Disasters & Emergency Management

Overview of how research is done and how to understand scholarly work including reading, understanding and applying studies from the field of disaster research.

The minor in Emergency Management consists of eighteen (18) hours of Emergency Management courses which include: Introduction to Disaster Management, Disaster Mitigation and Preparedness, Disaster Response and Recovery and 9 hours of EM electives.

Louisiana State University, Baton Rouge

Country: United States of America

Department /School: LSU hurricane Center, College of Arts and Sciences

Course: Undergraduate Minor in Disaster Science and Management

Curriculum Description

The Disaster Science and Management is an interdisciplinary program which provides student interested in the public, not for profit, and private sectors with:

- A broad understanding of the nature and impact of disasters on the natural, built and human environments;
- A basis for establishing strategies to effectively plan for disasters, mitigate the adverse effects of disasters, respond to disasters, and recover from disasters.

Undergraduate Minor in Disaster Science and Management: The Undergraduate Minor in Disaster Science and Management requires 19 hours, including 7 hours of required courses and 12 hours of technical electives. The minor is available to LSU students of any major. However, as with all minors, students from outside of the home college of the minor (in this case Arts and Sciences) are required to get permission from their Dean.

Courses Offered in Curriculum

Hazards and the Environment (DSM 2000)

Exploration of the interaction processes between natural/technical hazards and society that cause disasters, introduction to the natural and technological hazards and disasters; hazards and disaster management; environmental considerations and impacts.

Fundamentals of Emergency Management (DSM 2010)

Introduction and overview of emergency management functions and processes in federal, state, and local governments; roles of nonprofit and private organizations in disaster planning, response, and recovery; critical management issues in effective response and recovery to natural and man made hazards.

Hazards Seminar (DSM 3910)

Prerequisites. DSM 2000 and junior standing; May be repeated for a max. of 3 sem. hrs. Guest speakers and presentation of reports and discussion with students and faculty concerning a broad range of issues, problems, and topics related to disasters and emergency management.

Disaster Science and Management Internship (3) (DSM 3900)

Prerequisites: DSM 2000 and junior standing. Written consent of DSM program coordinator and supervising faculty member. Faculty supervised field study with an agency or organization whose mission is considered relevant to the emergency management system or disaster planning, response, or mitigation.

Technology and Emergency Management (3) (DSM3200)

Application of technology that may be applied in emergency planning, response, recovery, and mitigation; current and emerging technology applications; special issues and problems associated with the use of technology in emergency management.

Research in Disaster Science and Management (3) (DSM4900)

Prerequisites.: SOCL 2211 or equivalent and 12 hrs of course work including DSM 2000 and core courses in the disaster science management concentration or minor; consent of instructor.

Directed Readings in Disaster Science and Management (1-3) (DSM4996)

May be repeated for a max of 6 sem. hrs. For students with at least junior standing and 12 hrs. of course work including DSM 2000 in the disaster science management concentration or minor.

Millersville University of Pennsylvania, USA

Country: United States of America

Department /School: Center for Disaster Research and Education

Course: Multi-Disciplinary Minor in Environmental Hazards and Emergency Management

Curriculum Description

Millersville University has developed a multi-disciplinary minor in Environmental Hazards and Emergency Management. The courses are now being offered on-campus. They are not only suitable for traditional undergraduates, but also worthy of consideration for those pursuing appropriate college credits toward Certified Emergency Manager status. The multi-disciplinary minor requires 18 credits for completion.

Courses Offered in Curriculum

SOCY313/EHEM 313 Sociology of Disaster (3 credits)

ESCI 101/EHEM 101 Earth Systems and Natural Hazards (3 credits)

OSEH 120/EHEM 120 Introduction to Occupational Safety (3 credits)

GEOG 372/EHEM 372 Urban and Regional Planning (3 credits)

Electives (Choose 6 credits)

OSEH 221/EHEM 221 Industrial Fire Prevention, Protection, Control (3 credits)

SOCY 314/EHEM 314 Sociology of Terrorism (3 credits)
GEOG 295/EHEM 295 Geographic Information Systems (3 credits)
EHEM 498 Internship or Independent Project in Emergency Management (3 credits)

North Dakota State University, Fargo

Country: United States of America
Department /School: Department of Sociology/Anthropology
Course: Minor in Emergency Management

Curriculum Description

North Dakota State University is offering a minor in emergency management. The Emergency Management Program is multidisciplinary and is geared both to academic disaster research curricula and the applied aspects of emergency management. The program is built on a core of social science courses to help students approach the study of disasters and emergency management from a sociological perspective. Additionally, the program draws from other disciplines that enhance the development of processes and techniques to prevent disasters and to manage emergencies. This comprehensive and challenging program strongly emphasizes the applied and technological aspects for managing emergencies and disasters. Thus, NDSU offers a wide variety of applied courses to ensure that graduates of the emergency management program gain technical knowledge, expertise and the theoretical framework to join the workforce with a competitive edge. Furthermore, the program works in partnership with practitioners in emergency management organizations across the nation to allow students practicum opportunities in the field.

Courses Offered in Curriculum

EMGT 201 Introduction to Emergency Management (3 credits)
SOC 420 Sociology of Disaster (3 credits)
Required Disaster Stage Courses (12 credits):
EMGT 411 Community Disaster Preparedness (3 credits)
EMGT 421 Hazard Mitigation Theory and Practice (3 credits)
EMGT 431 Disaster Response Operations and Leadership (3 credits)
EMGT 483 Holistic Disaster Recovery (3 credits)

Shaw University, North Carolina USA

Country: United States of America
Department /School: Department of Business and Public Administration, College of Graduate and Professional Studies
Course: BA Degree in Public Administration with a Concentration in Emergency Management

Curriculum Description

Shaw University is offering a Concentration in Emergency Management within the Bachelor of Arts Degree Program in Public Administration. The Bachelor of Arts Degree Program in Public Administration with a Concentration in Emergency Management provides "educational opportunities for a diverse population" and "graduate students with demonstrated competencies in their chosen fields of study." The program is designed to prepare students for management positions in agencies that provide varied emergency management-related services. Further, the program aims to produce graduates who are knowledgeable of the background, principles, and practices related to all phases of disaster and hazards management and homeland security; organizational crisis management and continuity in the face of disasters and hazards; and

technology and research relevant to emergency management. The program will also develop in students the communications and public relations skills needed in handling emergencies.

Courses are offered online and via videoconferencing, as well as interactive classroom participation, primarily in the evening. Enrollees have the opportunity to take some of their classes at Shaw's College of Professional Education (CAPE) centers located in nine counties in North Carolina. (For instance, they may take all general education/core curriculum courses at a CAPE center.) The program is designed for working adults and traditional undergraduate students. The working adults will be primarily those working in a field related to emergency management and may possess a certificate, some college credit hours, or associate degree in a related discipline.

The minimum number of semester hours required for graduation with a bachelor's degree in public administration with a concentration in emergency management is 120. Students may also take a minor in emergency management by completing 15 semester hours in courses with an EMA prefix.

Courses Offered in Curriculum

Introduction to Public Administration
Introduction to Emergency Management: History, Aim, & Scope
Introduction to Terrorism/Homeland Security
Principles and Practice of Disasters/Hazards Mitigation, Preparedness, Response, and Recovery
Management Skills & Principles in the Context of Emergency Mgmt.
Public Administration and Emergency Management
Communications/Public Relations in Emergency Management
Business and Industry Crisis Management
Technology in Emergency Management Research and Analysis Methods in Emergency Management
Practicum in Emergency Management

Touro University International, USA

Country: United States of America
Department /School: College of Health Sciences
Course: Bachelor of Science in Health Sciences

Curriculum Description

Touro University International (TUI) College of Health Sciences offers a variety of programs with different concentrations and options leading to the Bachelor of Science in Health Sciences.

In order to earn a B.S. in Health Sciences from TUI students must complete a minimum of 124 semester credits. TUI will accept up to 92 semester credits transferred from other accredited colleges or universities (see transfer policy).

Complete at least 32 semester credits at TUI, in order to earn a degree.

Overview

The Touro University International College of Health Sciences offers an upper division program leading to a B.S. in Health Sciences with a Health Educator Concentration. Health education is concerned with preventing health problems rather than curing people once they become ill.

The coursework in health education provides a theoretical and philosophical foundation in principles of health promotion and community health education based on a synthesis of knowledge drawn from the physical, biological, social, and behavioral. Through the case study method students develop skills in needs assessment,

organizing communities and identifying and implementing educational strategies. The program graduate will be eligible to take a nationally offered test, the Certified Health Education Specialist examination (CHES). This optional certification offers national recognition of the graduate's capabilities.

In addition to Core courses in Health Sciences Students have to complete 12 credits of elective courses. In addition to other elective courses 5 courses on disaster management are offered by this Institute which are

Courses Offered in Curriculum

BHS411 Issues of Terrorism

This course examines the history and types of terrorism, various terrorist groups, and issues of terrorism as they relate to the planners and responders at the local level. Concepts of planning for a terrorist incident are presented with an emphasis on the integration of emergency operation plans.

BHS412 Disaster Relief

The course provides the student with an understanding of the mission and operations of Relief organizations. The relationship between local, state, federal disaster relief operations are presented and discussed. In addition, International relief organizations and their operations and management structure are discussed. The students will be able to plan and organize and implement a relief effort using an existing plan and how it is implemented in disaster response and recovery operations. Disaster relief assessment methods and tools for estimating disaster response and recovery needs are presented with an emphasis on protection of the public's health.

BHS413 Survey of Emergency and Disaster Management

Examines the multi-faceted issues of developing, planning, organizing, and managing disaster programs at the local level. The core components of a disaster program will be included: hazard and vulnerability analysis, mitigation and prevention, preparedness, response, and recovery.

BHS417 Emergency Planning and Operation

The course deals with the four core methodologies involved in emergency preparedness and response: Emergency Contingency Planning, Emergency Operation Planning, Incident Action Planning and Demobilization Planning. - The before, during and after phases of emergency planning and management. The course emphasizes the importance of political, interagency and multi-jurisdictional issues as well as incident stress. Emergency Operations examines the roles of fire, police, emergency medical services and other public agencies and volunteer groups like the Red Cross in emergency situations and disasters. The course focuses on the fundamental operational principles involved in emergency and disaster management, identifying the problems most typically encountered in the field and developing effective responses. This course examines the history and types of terrorism, various terrorist groups, and issues of terrorism as they relate to the planners and responders at the local level. Concepts of planning for a terrorist incident are presented with an emphasis on the integration of emergency operation plans.

BHS419 Risk Assessment

Environmental risk assessments are a tool to determine if contaminant releases, either current or future, pose unacceptable risk to human health or the environment. They are performed under Superfund regulations to support decision-makers in the selection of the cost-effective, risk-reducing cleanup decisions. In addition, risk assessments evaluate disposal criteria for landfills and the allowable emissions from process equipment. The guidance for risk assessment is provided by federal

and state agencies. In this course, the focus will be on the methods established by the US EPA to calculate the risk posed to human health under Superfund and other federal regulations. In addition, the fundamentals of management of risks will be presented. This course examines the history and types of terrorism, various terrorist groups, and issues of terrorism as they relate to the planners and responders at the local level.

University of Central Missouri,

Warrensburg

Country: United States of America

Department /School: Department of Safety Science and Technology

Course: Bachelor of Science Degree in Crisis and Disaster Management

Curriculum Description

The University of Central Missouri offers undergraduate program with a Bachelor of Science degree in Crisis and Disaster Management. The students will use the knowledge and skills obtained in the programs to:

Demonstrate an awareness of legal, professional and ethical responsibilities. Understand the importance of continuous professional development. Possess knowledge of contemporary Safety Science and Technology issues faced in local, national and global contexts.

Describe the four phases of emergency management: preparedness, mitigation, response, and recovery. Outline the roles and responsibilities of the private sector, public sector, and non-governmental organizations in the state and local emergency response plans. Use technological tools to organize information, communicate, and respond to crisis and disaster events. Program of Study in this major include three options: Emergency management, Hazardous Materials, Business Continuity.

Courses Offered in Curriculum

Crisis & Disaster Management, Community Mitigation and Recovery, Disaster Management Technology, Integrated Emergency Management, Research Issues in C&DM.

Directed Studies: Technology App. Special Projects: Field Exercises Internship in Crisis & Disaster Mgmt. Departmentally approved management electives, departmentally approved communication electives, and departmentally approved technical electives.

Emergency Management Option: Emergency Preparedness, Emergency Response, Disaster and Society

Hazardous Materials Option: Hazardous Materials Emergency Response, Managerial Issues in Hazardous Materials, Trans. and Storage of Hazardous Materials

Business Continuity Option :Business Continuity Planning, Personnel and Information Security, Crisis Management

University of Findlay, USA

Country: United States of America

Department /School: School of Environmental and Emergency Management

Course: Bachelor of Science in Environmental, Safety and Occupational Health Management, Emphasis in Emergency Management

Curriculum Description

The University of Findlay, School of Environmental and Emergency Management is offering a Bachelor of Science in Environmental, Safety and Occupational Health Management with an Emphasis in Emergency Management. The goal of the Emergency Management emphasis is to educate students in the art and science of emergency management so they may obtain positions at

all levels of private industry and government. The program will provide students with a education founded in the science of emergency management (risk management, logistics and emergency management operations), blended with traditional liberal arts education (psychology, sociology, criminology, public policy and administration) and business education (financial controls) to provide a well rounded graduate with the ability to manage the many aspects of natural and man made disasters. The emphasis of the program focuses on an all-hazards approach to emergency assessment, planning, mitigation, and recovery.

Courses Offered in Curriculum

Introduction to Emergency Management

This course will serve as a practical introduction for students who must understand the process of disaster planning, response, and mitigation through the use of selected case studies and examples of disasters from around the world to connect theory to real-world application.

Environmental Risk Assessment

Prerequisite(s): ESOH core or permission of instructor. This capstone course applies the principles of exposure and toxicity assessment to characterize risk using a case-study approach. The student will apply these principles to contaminants and exposure routes at a site selected with the instructor's approval. Class discussions and risk calculations will cover exposure assessments for air, water, soil, and food. Risk-based environmental decisions methods are introduced.

Threat and Vulnerability

This capstone course applies the principles of threat and vulnerability assessment to characterize risks facing communities and workplaces using a case-study approach. Class discussions will cover such hazards as: hazard and threat recognition, vulnerability analysis, biohazards, trend analysis, risk mitigation, continuity of business operations, and mutual aid agreements for the private sector. Risk-based decision methods are introduced.

Technician Level Emergency Response

This course provides participants with practical knowledge concerning response operations for emergency incidents involving hazardous materials. The course emphasizes the incident command system (ICS), methods of mitigation and control at an emergency response, safety issues considered in an emergency response, and termination procedures.

Personnel Emergency Preparedness

Emergency preparedness is a shared responsibility requiring each individual to take charge of their own preparedness. This course will review the needs and requirements for individual and family emergency preparedness and train the student in the preparation of individual and family emergency plans for family members.

Search and Rescue

This course will focus on the basics of search and rescue and include training to achieve the competencies required to demonstrate basic Search and Rescue (SAR) principles and skills to become Call out Qualified (CMQ), become certified in FEMA Community Emergency Response Team (CERT).

Emergency Management and Technology

This course will focus on the existing technology tools as well as discussions on tools of the future to be used in the assessment, planning, and management of emergencies. Technology to be reviewed and utilized include: Geographic Information Systems (GIS) and land use mapping systems, public health databases, and various

communication technologies. In addition the concept of communication inoperability will be addressed.

Emergency Management Law

This course will focus on the United States and Ohio statutes, regulations, and standards that govern emergency management. The class will review the Patriot Act; Disaster Mitigation Act; Stafford Emergency Assistance and Disaster Relief Act; 44 C.F.R.; Emergency Management and Assistance; Comprehensive Environmental Response, Compensation, and Liability Act; Federal Civil Defense Act of 1950, as amended; Public Law 96-342, Improved Civil Defense, 1980; Pollution Prevention Act; and the relevant Ohio statutes, regulations, and policies.

Incident Scene and Evidence Investigation

This course will focus on the basic considerations of concern prior to, during, and after the incident scene investigation. The course will emphasize the taking, preservation, and analysis of evidence for use in administrative, civil, and criminal matters. Additionally, the course will cover the law of evidence and the use of expert opinion as evidence. Interview techniques will also be discussed.

Principles of Management & Strategic Planning

This course is the introduction to management principles and long term strategic planning. It emphasizes the need for planning and the use of standard and non-standard planning techniques and procedures as they apply to emergency management planning.

Behavioral Aspects of Emergencies

The study of human behavior during an emergency to include: how do we function in normal situations versus how do we function in stressful situations and then add to it the component of experience? Does experience make a difference?

Emergency Management Finance

This course will focus on two areas of emergency management, the contracting for goods and services before, during, and after an emergency; and, the financial management of emergencies from the point of view of governmental agencies, businesses, and individuals.

Emergency Management Standards & Procedures 1

This course will explore the theory underlying the following national standards and industry procedures; National Incident Management System (NIMS), National Fire Protection Association (NFPA) 1600, Unified Command, Incident Command System, Mutual Aid and the National Model, Liaison, and Communicating in an emergency.

All Hazards Emergency Planning

This capstone course will be the culminating course in the emergency planning portion of the program. It will bring together concepts and procedures from previous course work and will address the following topics: Communications inoperability; mutual aid agreements; use of the national model proposed by Department of Homeland Security (DHS) and National Emergency Management Association (NEMA); business continuity; resource management; donations management; debris management; volunteer management; and leadership.

Emergency Management Standards & Procedures 2

The course will take the theory taught in ESOH and focus on the practical application of the following standards and procedures addressed in a scenario and case based learning format: NIMS, NFPA 1600, unified command, incident command system, mutual-aid and the national model, liaison, and communicating in an emergency. Case studies examine different workplace settings and roles (e.g. regulator, consultant, or victim) as well as the possible management tasks that students may encounter

in professional employment. Students are required to complete workplace and facility audits, create program documents, and conduct mock management assessments.

Survey of Emergency & Disaster Management

This course will offer participants the opportunity to learn about the latest technologies, events, and issues relevant to being an effective and well-versed emergency management professional.

University of Central Florida, Orlando

Country: United States of America

Department /School: College of Health and Public Affairs

Course: Minor in Emergency Management and

Homeland Security

Curriculum Description

The University of Central Florida, College of Health and Public Affairs, is offering a Minor in Emergency Management and Homeland Security. The Minor in Emergency Management enables students to comprehensively study the disaster management cycle, including emergency planning, mitigation, response and recovery. By completing the minor in emergency management program students will gain additional insight and knowledge that will help them find positions in various federal, state and local government and nonprofit organizations. The Minor in Emergency Management requires students to complete 18 credits hours of core courses.

Courses Offered in Curriculum

PAD 4110 Intergovernmental Administration (3 credit hours)

PAD 4392 Managing Public Emergencies (3 credit hours)

PAD 4712 Information Systems for Public Managers and Planners (3 credit hours)

PAD 4395 Disaster Response and Recovery (3 credit hours)

PAD 4390 Hazard Mitigation (3 credit hours)

Restricted Electives (select one)

CCJ 4661 Conflict & Terrorism (3 credit hours)

HAS 4938 Health Mitigation in Disasters (3 credit hours)

A minimum GPA of 2.0 is required in all courses used to satisfy the minor. Grades below "C" (2.0) or "S" grades are not accepted. At least 15 hours used in the minor must be earned at UCF within the department Internship or Independent Study cannot be used toward the minor.

University Of North Texas

Country: United States of America

Department /School: Department of Public

Administration, College of Public Affairs and Community Service,

Course: BS with a major in Emergency Administration and Planning

Courses Offered in Curriculum

Current Issues in Emergency Management

In-depth investigation of a contemporary issue of concern to emergency managers. Possible topics include catastrophic events, public health and disasters, volunteer organizations, and emergency medical services.

Introduction to Emergency Management

Introduction to the theory, principles, phases and processes of emergency and disaster management. Topics include hazard, risk, vulnerability and comprehensive emergency management. Course also examines alternative career paths, the evolution of the field and its future outlook.

Hazard Mitigation and Preparedness

Theoretical examination and practical application of pre-disaster management activities including hazard and

vulnerability analysis, structural and non-structural mitigation, capability assessment, planning, training, exercises and public education. Development planning, political advocacy and networking are heavily stressed. Prerequisite(s): EADP 3010.

Disaster Response and Recovery

Theoretical examination and practical application of post-disaster management activities including human behavior in emergency situations, warning, evacuation, sheltering, triage, damage assessment, disaster declaration, debris removal, media relations, crisis counseling, individual and public assistance, and other relevant functions. Decision making, incident command, EOC operations, coordination and service delivery strategies are also discussed. Prerequisite(s): EADP 3010.

Leadership and Organizational Behavior

Study of interpersonal relationships and organizational behavior as they apply to the field of emergency and disaster management. Topics include leadership, management, conflict resolution, influence and motivation. Prerequisite(s): EADP 3010 or consent of department.

Hazardous Materials Planning and Management

Planning for and management of hazardous materials incidents. Attention is given to environmental regulations as they relate to hazardous materials. Defensive strategies for hazardous materials response are identified. Prerequisite(s): EADP 3010 or consent of department.

Private Sector Issues

Study of business continuity and the role of businesses in emergencies and disasters. Topics include business impact analysis, recovery planning and multi-organizational coordination. Prerequisite(s): EADP 3010 or consent of department.

International Disasters

Explores issues pertinent to international disasters, including susceptibility of poor countries to natural disasters, the nature of complex emergencies, and the actors involved in humanitarian activities across national borders. Special attention is given to the social, political and economic barriers that perpetuate the vicious cycle of vulnerability as well as the need for long term solutions that promote beneficent forms of development. Prerequisite(s): EADP 3010 or consent of department.

Special Populations and Disasters

Identification and examination of special populations in disaster. Discussion of their needs and service delivery strategies. Emphasis on relevant response agencies and programs. Prerequisite(s): EADP 3010 or consent of department.

Technology in Emergency Management

Examination of the use of technology and computers in emergency management. Topics include software, hardware, information management, communication equipment and future innovations. Prerequisite(s): EADP 3010 or consent of department.

Capstone Course in Emergency Management

Synthesis of emergency and disaster management concepts and perspectives. Case studies of disasters are emphasized to provide real-world examples of applied principles. Discussion of current theoretical approaches and future trends in the field. Topics include sustainable development, resistance, resilience and vulnerability. Prerequisite(s): EADP 3010, 3035 and 3045.

Terrorism and Emergency Management

In-depth investigation into the ideological forces and groups involved in terrorist activity. Analysis of the effects of terrorism, including the similarities and differences to other types of disasters. Attention is given to weapons of

mass destruction and the unique challenges to prevent, prepare for, respond to, and recover from terrorist attacks. Prerequisite(s): EADP 3010 or consent of department.

Emergency Management Internship Preparation

Enrollment in this course is required for pre-career EADP students. Course prepares students for an internship. Recommended to be taken the term/semester before the student serves the internship. Periodic seminars cover career counseling; resume development, professionalism and interview skills. Prerequisite(s): 15 hours of EADP course work, including EADP 3010, 3035, 3045, and consent of internship coordinator.

Emergency Management Internship

Provides practical experiences geared toward the integration of theory and practice in a supervised emergency management setting. Requires a minimum of 240 contact hours within the practicum setting and attendance at scheduled classes. Enrollment in this course is required for pre-career EADP students. Prerequisite(s): EADP 4800, 15 hours of EADP course work including EADP 3010, 3035 and 3045, and consent of the internship coordinator. Application for approval of the practicum site occurs in the term/semester prior to enrollment in this course.

2) PART II - DISTANCE LEARNING & ONLINE COURSES

Charles Sturt University, New South

Wales

Country: Australia

Department /School: Faculty of Health Studies

Course: Bachelor of Social Science with an Emphasis in Emergency Management

Curriculum Description

CSU's Bachelor of Social Science (Emergency Management) focuses on the principles and practices associated with prevention, preparedness, response and recovery associated with emergency situations. The Bachelor of Social Science (Emergency Management) aims to develop a practical as well as theoretical base for those people who have responsibilities in the field of Emergency Risk Management. The course is designed to meet the needs and interests of a variety of client groups ranging from public bodies concerned with the protection of life and property such as local government, the police, fire, ambulance, state emergency services and community and health services to a myriad of private sector groups (e.g. the insurance industry, manufacturing industry).

Course structure

The Bachelor of Social Science (Emergency Management) consists of 20 subjects. Students may exit with an Associate Degree in Social Science (Emergency Management) after the first 15 subjects are completed.

Introduction to Emergency Management

This subject examines the scope and diversity of emergency management and its various functions. The subject also focuses on the theory and concepts of emergency prevention, preparedness, response and recovery, the roles and functions of the key organizations in emergency management and the dynamics that occur in their interrelationships.

Courses Offered in Curriculum

Introductory Sociology

This subject considers the nature of our society and how, as members of social groups, we are both shaped by and shapers of it. Sociology makes use of theoretical perspectives and research methodologies to generate knowledge and understanding of the social world. Issues explored by this subject include class, gender and ethnicity in modern society, class, work, modernity and globalization.

Emergency Management Planning 1

This subject provides the skills and knowledge to produce a hazard analysis/ risk assessment for a community/enterprise. This will include developing an understanding of hazard identification, hazard characteristics, community characteristics, interaction consequences, risk assessment and vulnerability.

Foundations of Psychology 1S

This subject introduces the general field of psychology, its scientific and professional development. It examines some important areas of psychology including learning, developmental psychology, social psychology, personality, health psychology and psychological disorders.

Emergency Management Planning 2

In this subject, students will analyze the decision making processes used by emergency management professionals in managing emergency situations. Through the exercise of reflective practice, students will be further equipped in their approach to critical decision making as emergency management practitioners dealing with the prevention, preparedness, response and recovery aspects of emergency management.

Emergency Management Planning 3

This subject introduces emergency management planning. It examines the planning process, the specification of emergency management needs, resource availability, needs ratification, organizational design, the selection of emergency management strategies and planning implementation.

Emergency Management Planning 4

In this subject students will gain the skills and knowledge to be able to develop standard operating procedures for the management of emergency situations, define the relationship of standard operating procedures to their emergency management plans, identify training requirements and write exercises to test their plans.

Social Research

This subject provides a structured introduction to social research including quantitative, qualitative and feminist methods. It explains what is involved in doing research, e.g. how research is designed, how information is collected by means of interviews, questionnaires, observation, experiments, or case studies, and how information is processed, analyzed and interpreted. It demonstrates how computers are used in social research.

Organizations and Management

This subject examines the philosophy and role of management within organizations. The various aspects and functions of management are analyzed so that students can apply management principles and practices within both public and private sector organizations. Main topics are planning, organizing, leading and controlling, as well as management theory, ethics and social responsibility, organizational culture and managing change.

Health Psychology

The subject investigates psychological aspects of health and health care. It examines the influence of stress and certain risk behaviors on health, and people's reactions to illness and medical treatment. The subject also discusses psychological approaches to health care.

Emergency Operations Management 6 (16 points)

In this subject students will enhance their understanding of current emergency operations management and specifically what actions could be taken during the pre-impact and impact phases of any emergency. The subject will cover current legislation, emergency prevention, and communications during emergencies, the three phases of an emergency, current pre-impact

arrangement, the roles, responsibilities and authority of the Emergency Services and specifically what actions could be taken during the impact phase of an emergency/disaster.

Business Law

Examines major features of the Australian Legal System by analyzing, describing and researching its structure, creation and interpretation. Introduces the concept of civil liability by looking at substantive areas such as contract and tort law. Criminal liability in business is also examined. Property, both real and personal, is introduced through study of its framework and various property interests.

Ethical Theory

Students are introduced to a range of theories of ethics and central moral notions, including autonomy, justice, utility and sympathy. This theory is deployed in the interpretation and analysis of moral life. Students are introduced to the notion of a moral dilemma, and, more generally, the way in which theoretical notions can inform concrete ethical decision-making.

Community Analysis

The subject looks at community as a means of addressing social, environmental and economic problems in a globalizing world which is seeing a strong social and political push for action to be taken by local communities. Starting from the perspectives of local professionals and active citizens, the subject applies sociological tools to community capacity in terms of social capital, interaction, organization, inequality, and conflict and power relationships both within and beyond the community. We conclude by looking at the implications of globalization and cultural change for local communities.

Human Resources Management

The aim is to develop an appreciation and understanding of human resource management from both the specialist and generalist perspective. In this respect how the role of the human resource manager fits into an organizational framework, and how this role contributes to better people management, will be analyzed.

Organizational Behavior

This subject aims to provide students with an understanding of how human behavior occurs within organizations at the individual, group and organizational levels. The subject examines the factors which influence behavior as well as strategies which may be adopted to increase the satisfaction and productivity of organizational members. Students may elect to exit at this point and graduate with the award Associate Degree in Social Science (Emergency Management).

Emergency Operations Management 8 (16 points)

In this subject students will enhance their understanding of current emergency operations management and specifically what actions could be taken during the impact and post-impact phases of any emergency. This subject analyses how an actual emergency/disaster was managed and what appropriate changes or initiatives could be enacted to enhance the future management of a similar emergency/disaster. The subject also analyses the specific actions that should be taken during the post impact phase of an emergency to facilitate its effective management.

Emergency Recovery Management - Principles and Practices (16 points commenced)

This subject introduces the principles and practices of recovery management including the recovery needs of a community, the recovery services that are available and how they might be activated. It includes a focus on the impact of trauma on communities and strategies for

minimizing trauma on communities following an emergency.

Developing Human Resources

This subject deals with the major aspects of the process of training and developing people in organizations. The theoretical framework is informed by a study of learning theory which then leads into a study of the core functions of HRD and its application in the organization. The subject attempts to keep a practical as well as theoretical balance in its approach.

Emergency Recovery Management - Principles and Practices (completed)

This subject introduces the principles and practices of recovery management including the recovery needs of a community, the recovery services that are available and how they might be activated. It includes a focus on the impact of trauma on communities and strategies for minimizing trauma on communities following an emergency.

Psychology of Stress and Trauma

This subject considers the common stresses that pervade everyday life. It offers a detailed understanding of the stress concept and practical techniques and suggestions for managing stress. This subject also deals with trauma and the psychological and social consequences that typically follow such catastrophes. Intervention and treatment strategies that can be offered at various stages after trauma are addressed. Systemic and direct care issues are covered. The impact of trauma on emergency and service personnel and on psychosocial helpers is covered. Students should note that this subject does not contribute to an Australian Psychological Society accredited major in psychology.

Emergency Recovery Management (Applied) (16 points)

This subject focuses on the impact of trauma on communities, industry, community infrastructure, groups and individuals in the context of needs that emerge following an emergency. Students compare the current shape of an actual community with that of another to highlight the differences in the recovery capability of communities. In this subject students will develop an understanding of the strategies to be implemented to assist a community to recover after an emergency/disaster including the reduction of the vulnerability of the community through decreasing their susceptibility and/or enhancement of their resilience.

American Public University

Country: United States of America

Department /School:

Course: Bachelor of Arts in Emergency and Disaster Management

Curriculum Description

The American Public University is offering a Bachelor of Arts in Emergency and Disaster Management. The Bachelor of Arts in Emergency and Disaster management seeks the following specific learning outcomes of its graduates. With reference to each of the respective areas of emergency and disaster management, graduates in this degree program will be able to:

- Identify and apply the disaster planning and management cycle from mitigation through recovery.
- Assess response strategies for nuclear, biological, chemical, and natural disaster incidents.
- Critically assess the intergovernmental and interagency responsibilities for disaster management support.
- Analyze the psychological and sociological factors and associated coping strategies for natural and manmade disasters.

- All courses for the Bachelor of Arts in Emergency and Disaster Management are offered through distance learning only.

Courses Offered in Curriculum

CJ395/EDM220 – Emergency Planning

Effective emergency planning is the key to surviving natural and man-made disasters. Risk analysis and the formulation of a comprehensive plan, followed by a vigorous and continuing testing program, are essential elements to surviving an emergency. Topics covered include threat assessment, risk analysis, formulating the plan, staffing the emergency operations center (EOC), coordinating with supporting agencies, and the importance of continuing liaison, managing an actual incident, and conducting an effective follow-up analysis. Various actual case studies are discussed.

GM464/EDM320 – Natural Disaster Management

This course addresses the planning, recovery, and response system in place in the United States for natural disasters. The course covers issues of organization, operations, training, and other issues associated with the management of natural disasters. [3 Semester Hours]

GM465/FCS413 – Special Operations in Emergency Medical Services

This course deals with the specialized issues associated with emergency medical services—those issues that are not commonplace or part of everyday procedure. Topics include emergency medical services in mass casualty, biological, chemical and radiological incidents. The course also covers unique topics in emergency medical services, to include the employment of services in complex contingencies, such as those faced when fire, police, terrorist, and other emergencies co-exist with the need to provide medical services on-scene and post-disaster. [3 Semester Hours]

MC477/EDM230 – Emergency and Disaster Incident Command

This course is a study of the theory and practice of incident command, the various methods of incident command, and specific focus on the Incident Command System (ICS) used in crises, disasters, and emergency management response systems. Cases are studied in order to assist students in understanding the management and leadership complexity associated with modern emergencies and disasters. [3 Semester Hours]

MM325/EDM340 – Consequence Management

This course addresses the potential results from nuclear, biological, and chemical incidents or uses. Topics include public health consequences of such incidents, emergency planning and response measures in place among U.S. agencies, and emerging detection and management technologies. Existing vulnerabilities to these types of incidents and attacks will also be discussed. Objectives of the course include identification of the historical development and use of chemical and biological weapons; definition of the types of chemical and biological weapons and their impacts; analysis of case studies related to the development and use of chemical and biological weapons, and research on chemical and biological warfare. [3 Semester Hours]

PY 431/PSY431 – Psychology of Disaster

This course focuses on the psychological and physiological human response to natural and man-made disasters. Using clinical research and case histories, students will examine normal and abnormal psychological reactions, the recovery process and principles of mental health care for victims of mass disasters. Differences between natural and man-made disasters are examined and factors that mitigate post-traumatic effects are reviewed. Psychological

aspects of Weapons of Mass Destruction (WMD) disasters are also considered. [3 Semester Hours]

SS489/HLS301 – Homeland Security Organization

This course is a study of federal, state, local, private, and other organizational entities involved in homeland security. It addresses the evolution of homeland security from early to modern times with an emphasis on the emerging homeland security structure, culture, and organization. [3 Semester Hours]

RQ300/COL300 – Research, Analysis, and Writing

This course outlines basic study and research techniques, the use of libraries, and the importance of research methodology and analysis for the social sciences. It is a writing intensive course that requires a sound understanding of written communication. Students enrolling in this course should be familiar with proper citations and documentation, grammar and syntax, organizing their writing, and parts of a paper. (Prerequisite: EN101 or EN102). [3 Semester Hours]

CJ410/HLS311 – Border and Coastal Security

This course is a study of the federal, state and local organizations involved in border and coastal security, associated homeland security issues, the various policy and operational strategies used for border and coastal access and security, and contemporary border and coastal security concerns. Topics also include immigration and non-U.S. approaches to border and coastal security. [3 Semester Hours]

GM160/HLS211 – Emergency Response to Terrorism

This course is a study of the emergency response to terrorism process, to include knowledge of response tasks, toxicology, mass casualty triage, decontamination, and other operational issues. [3 Semester Hours]

GM260/HLS212 – Chemical, Biological, & Radiological Hazards

This course for the non-scientist is a study of chemical, biological, and radiological science involved in the different forms of weapons of mass destruction. The course covers topics of basic science, treatment, short- and long- term effects, among other issues central to understanding hostile WMD agents. [3 Semester Hours]

MC444/EDM420 – Risk Communications

This course examines media management during local/national disasters and/or events. It will also address the media and all levels of governmental response. The focus will be on actual operations and on-site issues. [3 Semester Hours]

MC445/HLS312 – Port Security

Port Security is a survey course designed to provide students with a broad knowledge of port security issues. It will examine the critical importance of ports to trade and their vulnerability to disruption and attack. It will also examine several contemporary issues, including; the importance of sea borne trade to the North American and United States economies, the value of mega ports to sea borne trade, the vulnerabilities of ports to disruption and asymmetric attack, critical port security incidents such as the Halifax Explosion, and defensive measures to protect ports from disruption or asymmetric attack. [3 Semester Hours]

Empire State College, New York

Country: United States of America

Department /School: Center for Distance Learning

Course: Bachelor of Science with an Emergency Management Concentration

Curriculum Description

Empire State College, Center for Distance Learning, is offering courses leading to Bachelor of Science degree with a Concentration in Emergency Management and Disaster Studies. The program IS WEB based.

A Bachelor of Science degree requires a total of 128 credits. Students can bring into the program a maximum of 96 transfer credits. Credit from any regionally accredited institution of higher learning is accepted. Credit by evaluation may be requested for professional training in emergency management. Students will need 64 credits in liberal studies, 24-36 concentration credits and 45-advanced study – upper level credits with 24 in concentration.

Courses Offered in Curriculum

Introduction to Emergency Management
Introduction to Emergency Planning
Emergency Communications
Managerial Issues in Hazardous Materials
Disaster and Fire Defense Planning
Fire and Western Civilizations
Mass Disasters: Implications for Public Health
Mass Disasters: Implications for Public Policy
Mass Disasters: Implications for Public Safety
Psycho-Social Impacts of Mass Disasters
Organization and Management of Disaster Response
Business Continuity Planning and Disaster Response
Cyber Crime and Computer Forensics
Protecting America: Cases and Controversies

University Of Florida, Gainesville

Country: United States of America
Department /School: M.E. Rinker Sr. School of Building Construction
Course: Bachelor of Science in Fire and Emergency Services

Curriculum Description

The Florida State Fire College in conjunction with the University of Florida offers two-degree programs. The first is the BS in Fire and Emergency Services and the second is the MS in Fire and Emergency Services. There are three concentrations in the degree design. They are: Fire Management, Emergency Medical Services Management, and Emergency Management. There is a CORE set of courses, which must be completed across the curriculum and then the three concentrations. All of the CORE courses are related to Fire and Emergency Services. All of the courses are distance education through the Internet and taught by masters' level credentialed instructors or higher. The degrees are awarded by the University of Florida.

Courses Offered in Curriculum

FES 3015 Principles of Fire and Emergency Services Management

Fundamentals of management underlying the solution of problems of organization and operation of Fire and Emergency Services agencies.

FES 3033 Fire and Emergency Services Labor Issues

Credits: 3; Prereq: junior standing. Determinants of demand for labor and labor supply. Labor market equilibrium and changes in the equilibrium due to changes in unionization, public policies, and technology. Study of the effects of skill, job amenities, and discrimination on wage differentials. A review of PERC, FSLA, and unions will be included.

FES 3153 Fire and Emergency Services Information Technology

Credits: 3; Prereq: junior standing. Communications systems used in fire and emergency services such as high frequency voice/data, Internets and Intranets, satellite communications, GPS, and GIS will be the focus of this course. An introduction, examination, equipment assessment, implementation program, and maintenance management module will be provided for each system covered.

FES 3284 Management of Emergency Medical Services

Credits: 3; Prereq: junior standing. Course covers personnel and resource management issues in providing the EMS function. Quality Assurance and Utilization Review techniques are also covered. Practices and techniques for delivery of services and distribution of resources are included.

FES 3285 Advanced Leadership Issues in Emergency Medical Services

Credits: 3; Prereq: junior standing. Course covers organizational development issues in providing the Emergency Medical Services function in the fire-based, hospital-based and third service environments. Establishing and directing Emergency Medical Services work teams is also covered.

FES 3753 Fire and Emergency Services Financial Management

Credits: 3; Prereq: junior standing This course addresses planning, developing, presenting, funding, and implementing a budget for a fire and emergency services agency. Additional topics include special taxing districts, bond issues, and fund-raising campaigns.

FES 3755 Fire and Emergency Services Capital Equipment and Facilities

Credits: 3; Prereq: FES 3753 and junior standing. Procedures for the acquisition, utilization, and disposition of fire and emergency services apparatus and station facilities will be reviewed. Specification and purchasing of apparatus will be included. An examination of facility siting, building design, and land acquisition and financing will be conducted. Additional material will address special capital purchases such as communications, safety, and operational equipment.

FES 3803 Multi-Agency Incident Command

Credits: 3; Prereq: junior standing. Course deals with managing complex incidents that may require response from fire-rescue, emergency medical services, law enforcement, and/or other public safety sectors. Use of the Incident Management System is stressed.

FES 3815 Command and Control-Catastrophic Fire-Rescue Incidents

Credits: 3; Prereq: junior standing. Course covers incident command at multiple-alarm incidents, stressing rapid fire ground decision-making, safety, personnel accountability, and communications. Settings for scenarios include multi-family occupancies, hotels, high-rises, healthcare facilities, and large retail centers.

FES 3823 Fire and Emergency Services Integrated Operations

Credits: 3; Prereq: junior standing. Course covers the broad issues involved in comprehensive emergency management at the local level. The emergency management cycle of preparedness, mitigation, response, and recovery is stressed as are the legal, operational and administrative aspects of state and federal interface.

FES 4003 Fire and Emergency Services Public Policy and Administration

Credits: 3; Prereq: junior standing. The role of administrative agencies in the formulation and implementation of public policy. Emphasis on the politics of administration. Problems in administration management as it apply to Fire & Emergency Services. An introduction to Fire & Emergency Services government administration and management in urban settings. Emphasis will be placed upon the programmatic aspects of urban governmental management. Case studies will be included in this course.

FES 4023 Fire and Emergency Services Ethical Practices and Leadership

Credits: 3; Prereq: senior standing. The role of agency leadership and its impact on the continuing professionalization of the fire and emergency services. This course will examine traditional and evolving definitions, practices, and skills in leadership behavior. The topics of power, influence, ethics and organizational behavior will be addressed.

FES 4034 Regulatory Issues in Fire and Emergency Services

Credits: 3; Prereq: FES 4003, senior standing. Course introduces the student to safety, health, and environmental regulations on the state and federal levels that impact the delivery of fire and emergency services. OSHA, EPA, and NFPA regulatory requirements will be introduced along with methods and techniques to implement compliance programs.

FES 4045 Fire and Emergency Services Human Resource Management

Credits: 3; Prerequisite: FES 3015 and senior standing. Major human resource management functional areas for fire and emergency services agencies. Topics include: organizational employment planning, employment regulation, job analysis, performance assessment, recruitment and regulation, job analysis, performance assessment, recruitment and selection, training and development, employee/labor relations and compensation.

FES 4055 Fire and Emergency Services Public Relations

Credits: 3; Prereq: senior standing. Implementation of principles and methods in advocating factual claims and policy proposals; propositional analysis, evidence as demonstration, effecting reasoning processes to become experimental for listeners, ethics in controversy. The course will focus on public speaking and presentations, especially in the areas of technology, defense of budgets, and political leadership.

FES 4224 Management of Mass Casualty Incidents

Credits: 3; Prereq: senior standing. Course covers systematic approaches to triage, treatment, and transport in response to large scale emergency medical services incidents. Resource planning including coordination with hospital systems is also stressed.

FES 4225 Special Operations in Emergency Medical Services

Credits: 3; Prereq: senior standing. Course covers planning and management of non-routine emergency medical services. Environments covered include tactical medical operations, emergency medical services support of large-scale special events, and emergency medical services response to hazardous materials incidents.

FES 4585 Management of Fire Prevention Programs

Credits: 3; Prereq: senior standing. Course covers planning, promoting, and executing fire prevention functions, stressing legal responsibilities, needs assessments, negotiation, and planning activities.

FES 4685 Management for Arson Prevention and Control

Credits: 3; Prereq: senior standing. Course covers the elements of building a community Arson Control Plan. The course work includes data collection and analysis, coalition-building, juvenile interventions, and prosecution issues.

FES 4825 Design and Management of Community Disaster Exercises

Credits: 3; Prereq: FES 3823, senior standing. Course covers exercise design, presentation, and evaluation for testing a community disaster plan. Designs from table-top to full-scale are covered. Examination of existing community plans and models for developing plans will be tested.

FES 4835 Natural Disaster Phenomena in Florida

Credits: 3; Prereq: FES 3823, senior standing. Course covers the spectrum of natural disasters prevalent in Florida, past, present, and future. Topics include hurricanes, flooding, freezes, and agricultural emergencies. The concerns of planning, operations, mitigation, recovery, and evaluation will be included.

FES 4905 Special Studies in Fire and Emergency Services

Credits: 1 to 3; Prereq: approval of instructor. Special areas of study in fire and emergency services adjusted to the needs of the individual students.

FES 4930 Fire and Emergency Services Senior Seminar

Credits: 1; Prereq: senior standing. A discussion format will be used to harness the students perception of the fire and emergency services and the B.S. program in Fire and Emergency Services. A paper will be required from each senior that addresses a relevant topic within fire emergency services such as leadership, professionalization, recommended program improvements, or new technology.

FES 4935 Current Issues in Fire and Emergency Services

Credits: 3; Prerequisite: senior standing. Course will provide information and direction for fire service administrators on current legislative, legal, labor, and/or technology concerns facing the fire and emergency services agencies.

University of Richmond, Virginia

Country: United States of America

Department /School: School of Continuing Studies

Course: Bachelor of Applied Science in Emergency Services Management

Curriculum Description

The degree completion model allows students to complete from 60-64 semester hours of on-line coursework toward a Bachelor of Applied Studies in Emergency Services Management with a Minor in Emergency Management, Business Continuity, or Homeland Defense. General Distribution: 41-45 semester hours Selected from courses across the curriculum.

No more than 21 semester hours of business courses. Each student will receive an audit sheet outlining the specific requirements. **Note: Students will choose one of the following three minors:**

Emergency Services Management Systems and Theory

Examines the structure and missions of local, state, national, and international emergency management agencies and their relationship with public safety and voluntary organizations and other government departments. Relates structure and processes to legal requirements for disaster management. Discusses current theoretical approaches to disasters and to emergency management program management. Based on structure, legal requirements, and theory suggests courses of action for effective local program management.

Emergency Planning

Exposes students to basic emergency planning concepts at federal, state, local, and business level. Also introduces students to design and use of exercises to test and refine plans.

Managing Emergency Operations

Covers management of complex emergency operations in field using incident management systems and role of emergency operations centers in directing disaster response.

Disaster Exercises

Examines the role of disaster exercises and tests in an emergency management or business continuity program and addresses how to design and conduct exercises for training and for evaluation. Identifies strategies for use of lessons learned to improve operations and teaches principles of management of an exercise program.

Defending Communities--Integrating Mitigation, Preparedness & Recovery

The integration of mitigation, preparedness and recovery activities is critical to protecting communities from disaster impacts. Addresses value of each phase of emergency management and discusses strategies for effective plans and linkages in building community disaster resistance.

Business Continuity Program Management

Addresses management of business continuity programs and activities in both the corporate and public sector environments. Discusses components of a business continuity program and their relationships to the overall enterprise. Identifies the role of business continuity as a key component of strategy, and highlights areas of concern in ensuring a business continuity program supports the entire organization in its response to disaster.

Business Continuity Planning

Explores the role, organization, and management of business continuity planning in surviving the impact of disaster, continuing to operate to serve clients or customers, and rapidly recovering to full operations.

Managing Emergency Operations

Covers management of complex emergency operations in field using incident management systems and role of emergency operations centers in directing disaster response.

Disaster Exercises

Examines the role of disaster exercises and tests in an emergency management or business continuity program and addresses how to design and conduct exercises for training and for evaluation. Identifies strategies for use of lessons learned to improve operations and teaches principles of management of an exercise program.

Information Technology Disaster Recovery

Information technology applications now routinely handle hundreds of millions of dollars in commerce in large corporations. Addresses the issues of information technology risk and examines the technical alternatives to protect critical data and information services from loss or disruption in disasters.

Introduction to Public Relations

History, principles, and practice of public relations in business, social welfare, governmental agencies, and education; responsibilities and demands on public relations practitioner; how practitioner relates to employer, media, and public.

Homeland Defense Policy and Programs

Describes evolution of homeland defense as policy, programmatic, and organizational issue. Identifies current policies and programs, suggest evaluation measures, and assesses their effectiveness against potential threats. Examines role of governmental and voluntary citizen organizations in creating an effective homeland defense.

Terrorism

Examines political basis for terrorism and identifies potential motivations of terrorists and their operational implications. Explores terrorist weapons and tactics. Discusses courses of action for terrorism prevention, detection, and response.

Weapons of Mass Destruction

Nuclear, biological, and chemical weapons offer both terrorists and rogue states a powerful selection of tools to swing the correlation of forces in their direction. Understanding range and characteristics of these weapons, how they are most effectively employed, and potential impacts are critical to defending communities against them. Provides detailed look at history, capabilities, and tactics and explores options available to both attacker and defender.

Terrorism Law

Examines current state of national and international law on terrorism, including aviation and maritime law as applicable. Considers practical issues involved in enforcing laws on terrorism, and studies the interaction of law and policy in the context of protection of society from its enemies while preserving the essential fabric of law.

Technologies for Emergency Management

Explores how to select, implement, manage, and employ technology systems (including Internet applications) to increase the effectiveness of incident detection and location, response management, and recovery.

Prerequisite: ISYS 203U.

Current Issues in Emergency Services Management

Examination of current issues in field, such as volunteers, emergency communications, grants and fund raising, staffing levels, etc. *Prerequisite:* Emergency Services Management 300U or permission of ESM Academic Program Director.

Law and Ethics for the Emergency Services Manager

Current legal principles and ethical issues which impact emergency services, including both provision of care and services and management of service.

Social Dimensions of Disaster

Examines how populations respond to disasters including such areas as response to warnings, evacuation reactions, and looting. Suggests strategies for management of formal and emergent organizations and disaster stressors on individuals, organizations, and groups. Discusses development of effective programs for management of community change to increase disaster resistance.

Advanced Planning Practicum

Focus on complete planning process for an organization or community resulting in the drafting of a complete agency or jurisdiction emergency operations plan or business continuity plan. *Prerequisite:* ESM 302U or instructor permission.

Disaster Exercises

Provides managers of voluntary agencies with disaster roles examination of current issues in identification of agency roles and missions, the influence of evolving characteristics of disasters, government and public response to disasters, and resource planning and management.

apstone Course: 3 semester hours**ESM Capstone Course**

Examines the future of disasters and their management in the context of long-term political, environmental, technological, economic and social change. Identifies current methods for futures analysis and provides a framework for developing tools and resources to design future missions and strategies for professionals in both emergency management and business continuity and their organizations. Develops an understanding of the relationships of vision to the future and relates that to the department of programs to protect lives, property and the environment at any level.

(3) POSTGRADUATE LEVEL CURRICULUM WORLD WIDE

• 1) PART I - ON CAMPUS

COURSES

University of British Columbia

Country: Canada

Department / School: The School of Community and Regional Planning

Course: Master's Degree in Planning with Specialization in Disaster and Risk Management

Curriculum Description

The School of Community and Regional Planning offers graduate degrees in planning at the Masters and Ph.D. levels that allow for a specialization in disaster and risk management. At the Masters level substantial coursework and an approximately two-year residence are required. Also located at the University is the Disaster Preparedness Resources Centre, which provides access to information through its library and facilitates research that supports counter-disaster planning and mitigation activities.

This area of concentration focuses on understanding, assessing, and planning for natural disasters and other types of environmental risks. The scope is broad and ranges from earthquakes, floods, and terrorism disasters to environmental pollution, ecosystem collapse, and global climate change. Every community faces environmental risks. The potential for widely-felt catastrophe is increasing as urban populations in hazardous regions grow, the built environment ages, and economies become increasingly connected. Development choices often reduce the buffering capacity of natural ecosystems. Planning for security has also, since 9/11, become salient on many political agendas. Moreover, many of the myriad decisions, policies, and plans made by communities and governments (e.g., land use zoning or infrastructure planning) often have profound but unrecognized impacts on environmental risks. A sound understanding of risks and risk management is therefore important for all planners to acquire.

Courses Offered in Curriculum

The foundational courses for this AOC are PLAN 548K (Natural hazards and society) and PLAN 599 (Decision analysis and risk management for environmental and technology questions). Both provide conceptual grounding in the area, with PLAN 548K emphasizing understanding and planning for natural hazard risks and PLAN 599 emphasizing methods of risk analysis and decision-making. Students focusing in this AOC should take both these courses no later than Winter Term 1 of their second year in the master's program. Students should also take two additional courses from those listed below. One of these should be a planning practicum or practice-oriented course: PLAN 514, PLAN 597, PLAN [TBA] (course offered by L. Pearce), or an internship (PLAN 548X) approved by the student's faculty advisor.

Electives:

Applications in planning analysis: This course focuses on computer applications in planning analysis and research. It aims to help students develop skills through problem-focused learning. It is intended for second-year master's students who have completed PLAN 511 or its equivalent.

The course promotes learning-by-doing in the context of real-world planning problems. Students will learn analytical concepts, and gain computer skills and practical experience by working with actual problems and real-world datasets. They will also critically reflect upon the exercise by discussing issues related to data, problem scoping, analysis strategy, and decision-making

context. The course emphasizes statistical analysis and GIS. Students will have the option to explore a third computer application in their term projects.

The first third of the course will focus on statistical concepts and analysis using the SPSS software program. Topics will include tests of statistical independence, multivariate linear regression, dummy variables, and regression diagnostics.

The second third will focus on geographic information system (GIS) and spatial analysis using ArcGIS software. Topics will include working with spatial data, map types, making maps, and basic analysis such as buffering and producing spatial statistics.

Assignments for the statistical and GIS portions of the course will utilize real-world datasets. This year, they will relate to the themes of disaster management planning and transportation planning. The SPSS assignments will involve analysis of travel behavior and transportation demand in a U.S. city. The ArcGIS assignments will involve analysis of multi-hazard risks and planning strategies for a B.C. community.

The final portion of the course will introduce students to other types of analytical problems, approaches, and software (e.g., regional simulation models). Students will conduct a term project involving SPSS, ArcGIS, or some other analytical software program of their choice. Examples will be provided, but students may also design their own project. Students will present their term projects at the end of the course.

Natural hazards and society: This course introduces students to the study of disasters and disaster management planning. It addresses such questions as: what causes catastrophes? Why are disaster losses increasing? And, how can the impacts of disasters be effectively managed and reduced? The course focuses primarily on natural disasters in the U.S. and Canadian context, but will also touch on technological hazards, human-induced disasters, and disasters in the developing country context. It emphasizes societal aspects of disasters from the perspectives of research in planning, sociology, geography, and other disciplinary and interdisciplinary social sciences.

Topics to be covered include: conceptualizing hazards and disasters; understanding disaster impacts; disasters, development, and sustainability; disaster vulnerability; risk perception; risk assessment; role of government; mitigation and preparedness planning; and disaster response and recovery.

Decision insights for planning and policy analysis: This course will explore the links between the rich writing on good decision making in all aspects of life and good practice in policy analysis, planning and evaluation. We begin with an introduction to recent academic and popular writing on decision making, including normative (what would be perfect) descriptive (how we typically do it) and prescriptive (how to do it better) views. These concepts serve as a starting point for learning about good practice as a professional in policy analysis. We will make use of several applied case studies in British Columbia in which concepts of decision research have been used as a basis for designing and conducting applied policy analysis and program evaluation.

Post-sustainability planning: The course will begin with a short series of lecture/discussions to introduce participants to the concept of post-sustainability planning and to major dimensions of the problem. Subsequent sessions will be devoted to detailed explorations of particular issues chosen by the students. After initial class discussion, individuals or small groups of students will develop speculative but detailed planning scenarios describing what the post-sustainability world might look

like' and the policy decisions that might get us there. Disagreements and alternative scenarios (including the case for the status quo) are encouraged. Participants will present their analyses in class. In some cases, a debating format may be appropriate.

Decision analysis and risk management for environmental and technology questions. Provide students with an introduction to the basic concepts and methods of risk management and decision analysis so they can be intelligent readers and critics of these methods in the future. Provide the basis for broader studies in risk and decision-making, by serving as the introduction to these issues, which can be supplemented in other courses. Provide opportunities for learning through problem-solving, discussion, feedback, and interaction with peers. Provide opportunities for individual study on issues of the student's choice, in order to make the course more relevant to the student's other studies.

National Graduate Institute for Policy Studies

Country: Japan

Department / School: Building Research Institute and Japan International Cooperation Agency

Course: Master of Disaster Mitigation

Curriculum Description

The earthquake is one of the most deadly natural disasters. An earthquake can occur without warning, as precise prediction is not yet feasible even with the most advanced technology. A strong earthquake can devastate homes and civic infrastructure, causing huge human and economic loss. Developments in seismology and earthquake engineering technology have made developed countries more resilient to earthquakes. However, developing countries in earthquake-prone areas remain vulnerable.

Improving seismic safety in developing countries demands the development of appropriate technology and policies that consider the actual conditions and systems of each country. Responsible experts must enhance their capability to make and implement suitable policies, using advanced knowledge in seismology, earthquake engineering and tsunami.

This program, in collaboration with the Building Research Institute (BRI) and Japan International Cooperation Agency (JICA), aims to foster the education of experts so that they will have higher capability for earthquake disaster mitigation. Through the program, students will:

- Acquire information and techniques in the field of seismology, earthquake engineering and tsunami as basic knowledge necessary for seismic disaster mitigation;
- Learn the theories on which disaster mitigation policy is based, and to study Japanese policies and systems;
- Acquire the capability to develop appropriate technology and policies specific to local conditions, through problem-solving practices in the program.

Curriculum 2005 - 2006

- Required Course
- Special Lecture
- Recommended Courses
- Seismic Disaster Mitigation Policy
- Disaster Risk Management
- Earthquake Hazard Assessment
- Earthquake Risk Assessment
- Disaster Mitigation and Development Assistance
- Tsunami Hazard Assessment
- Tsunami Countermeasures
- Elective Courses
- Earthquake Phenomenology
- Characteristics of Earthquake Disasters

- Earthquake Circumstance
- Information Technology Related with Earthquake and Disasters
- Structural Analysis
- Structural Dynamics
- Seismic Design
- Seismic Evaluation and Retrofitting
- Theory of Tsunami
- Case Study (Practice for Earthquake Disaster Mitigation Policy)
- Case Study (Practice for Earthquake Disaster Mitigation Policy)
- Case Study (Practice for Earthquake Disaster Mitigation Policy)
- Case Study (Practice for Tsunami Disaster Mitigation Policy)

Nepal Engineering College

Country: Nepal

Department / School:

Course: Master's in Disaster Risk Management

Curriculum Description

Nepal Engineering College is offering a Masters in Disaster Risk Management. The Masters in Disaster Risk Management program is designed to enhance capability for management and mitigation of disasters and associated risk through advancement and imparting of multi-disciplinary knowledge and test practice. A total of 60 credits are required to complete the course.

Courses Offered in Curriculum

First Semester:

- Fundamental of Project Management (3 credits)
- Disaster Management: Principles and Practices(3 credits)
- Disaster Mitigation and Preparedness(3 credits)
- Fundamentals of Risk Management(3 credits)
- Governance and Disaster (3 credits)

Second Semester:

- Disasters and Development (3 credits)
- Tools in Disaster Management (3 credits)
- Post Disaster Damage and Needs Assessment(3 credits)
- Community and Disaster Management(3 credits)
- External Relation and Resource Management in Disasters (3 credits)

Third Semester:

- Contingency Planning and Emergency Management (3 credits)
- Seismic Hazard Management (3 credits)
- Rehabilitation and Reconstruction (3 credits)
- Disasters and Environmental Management (3 credits)
- Elective I (3 credits)

Fourth Semester:

- Conflicts and Man Made Disasters (3 credits)
- Elective II(3 credits)
- Project Work/Thesis (3 credits)

Istanbul Technical University

Country: Turkey

Department / School:

Course: Master's Degree in Emergency Management

Curriculum Description

Istanbul Technical University is offering a Master's Degree in Emergency Management in cooperation with Oklahoma State University. The program is designed to educate professionals in charge of the emergency and/or disaster management systems. Graduates of the program will have the necessary knowledge and abilities to establish and coordinate effective disaster management capacities and systems with an ultimate

goal of saving more lives and property. The Master's Degree in Emergency Management is designed for local and central government agencies, military, universities, public utilities, private and public sectors, information services, human resources and security, transportation agencies, medical institutions, tourism, hotel and sports facilities, non-governmental organizations, risk managers, and consulting agencies. Graduates of the program will be able to: demonstrate knowledge on the effects of natural and man-made disasters, develop an ability to think holistically, demonstrate knowledge on preparation, mitigation, response, and recovery phases of emergency management, communicate effectively and work in multi-disciplinary teams.

Admission Requirements:

A Bachelor's Degree (BA or BS in any field)
 English Proficiency (TOEFL Score of 213, or Proof of English Language knowledge through the KPDS, UDS, or ITU English Proficiency Exam)
 Program will be limited to 30 students

Courses Offered in Curriculum

The structure of this Program is as follows:
 Non-thesis graduate program
 Convenient schedule for professionals – evening and weekend classes
 3 quarters (10 weeks per quarter)
 36 credit hours (3 credits/course: 8 core courses + 4 elective courses)
 Graduate Project/Internship

Core Courses:

1st Quarter:
 DEM 501 Principles of Disaster and Emergency Management
 DEM 502 Legal Aspects of Disaster and Emergency Management
 DEM 503 Risk Assessments for Emergency Management
 2nd Quarter:
 DEM 504 Disaster Information Systems
 DEM 505 Principles and Practices of Hazards Mitigation
 DEM 506 Public Policy Analyses
 3rd Quarter:
 DEM 507 Program Evaluations
 DEM 508 Managerial Decision Making and Communication Skills
 DEM 509 Graduation Project/Internship
 Elective Courses:
 1st Quarter:
 DEM 509 Management & Personnel Administration
 DEM 510 Post-Disaster Housing
 DEM 511 Environmental Issues in Disaster Management
 DEM 512 Organizations: Design, Structure & Processes
 2nd Quarter:
 DEM 513 Businesses and Industry Crisis Management
 DEM 514 Understanding and Responding to Terrorism
 DEM 515 Fire Risks
 DEM 516 Management of Hazardous Materials
 3rd Quarter:
 DEM 517 Incident Command Systems
 DEM 518 Management, Budgeting & Finance
 DEM 519 Social and Economic Aspects
 DEM 520 Special Topics in Disaster and Emergency Management

Istanbul Technical University offers the Master's Degree in Emergency Management through a traditional classroom setting and via distance learning. Courses with Professors from the United States will have in-class sessions at ITU as well as supplemental distance

learning options.

Coventry University

Country: United Kingdom
 Department / School: School of Science and the Environment
 Course: Master of Science by Research in Disaster Management

Curriculum Description

Established in 1999, the MSc by Research in Disaster Management offers the opportunity for in-depth study of social, political, environmental or engineering aspects of disaster preparedness. The program is aimed at graduates from a wide range of discipline backgrounds and career experiences, including professional emergency managers from the public and private sector, aid workers, and engineers who work in a disaster setting.

Meet the generic aims outlined in the framework regulations

Provide an opportunity for graduates from a wide range of disciplines to develop through combined programs of taught and research components, a deeper appreciation of the issues associated with risk assessment, preparedness, recovery, development and the enhancement of community capacity in a wide range of disaster scenarios

Provide for the needs of experienced practitioners in appropriate fields to enhance their career opportunities through a period of academic study

Provide the opportunity for graduates to obtain a specialized qualification which has a recognition and currency within the international agencies working in health, development and emergency management areas

Entry requirements: Successful applicants must normally hold at least a lower second Honors degree in a related subject. Applicants with a lower class of degree and/or from outside of these areas will be considered individually and are usually interviewed prior to being offered a place. Applicants without a first degree, but who have relevant work experience, are also considered on an individual basis.

Courses Content

Typical research projects include:
 Use of vulnerability assessment in disaster management;
 Application of GIS in emergency management; and
 Impact of persistent Drought in Western Sudan.

Disaster Management M. Sc degree

The MSc in Disaster Management as a taught course is designed to introduce students to the key concepts and practices of disaster management, to equip them to conduct thorough assessments of hazards, risks, vulnerability and capacity and to be able to critically evaluate and apply key elements of planning and management for the effective response to emergencies and disasters.

The course runs full time over one year, or part time up to 3 years, and comprises 5 core modules, 5 additional modules and a dissertation. A Post Graduate diploma may be awarded where a dissertation is not completed and a Post graduate certificate where only the 5 core modules are completed. Normal entrance requirements are a minimum of a second class bachelor's degree. In some circumstances appropriate prior learning and professional experience may be substituted.

There is ample opportunity for students to focus their learning on their particular professional development needs.

Staff teachings on the course have a wide range of practice based and research skills and form a cohesive multi-disciplinary team with a strong commitment to advancing disaster management research and practice.

Disaster Relief & Development Engineering MSc by Research degree

This course offers the opportunity for study and research within the area of Disaster Relief and Development Engineering. It will appeal to those engineers who wish to research the application of civil engineering principles and methodologies to facilitate the relief and mitigation of world-wide disasters. Students may focus their studies and their research topic on one particular branch of civil engineering appropriate to their interests and/or professional experience.

Entry requirements

Successful applicants must normally hold at least a lower second Honors degree in a related subject. Applicants with a lower class of degree and/or from outside of these areas will be considered individually and are usually interviewed prior to being offered a place. Applicants without a first degree, but who have relevant work experience, are also considered on an individual basis.

Courses Content

The taught modules are drawn from the taught MSc courses in Civil Engineering, Civil and Structural Engineering, and Disaster Management and therefore offer a wide choice of options. Staffs available for supervising research projects specialize in a similarly wide range of subject areas, including structural mechanics, materials, hydraulics, urban drainage, geotechnology, management, and disaster theory. The course aims to provide an opportunity for gaining a research qualification in Disaster Relief and Development Engineering via a route that is shorter and more flexible than an M Phil or PhD, but which has more research emphasis than a taught Master's. It is suitable for both full-time and part-time students, and is particularly suitable for part-time students in employment who wish to carry out research on a work-related topic.

Emergency Planning MSc by Research degree

This new course offers graduates the opportunity for study and research across a wide range of topics and is intended to develop knowledge and understanding of the management and communications principles requirement for a range of emergency scenarios. It is aimed at graduates from a wide range of discipline backgrounds and career experiences including professional emergency managers from the public and private sector, emergency service workers, and those with a responsibility to ensure an appropriate response to major incidents and disaster.

The course aims to:

- Meet the generic aims outlined in the framework regulations
- Provide an opportunity for graduates to develop, through a combined program of taught and research components, a deeper appreciation of the theoretical and practical issues associated an understanding of the roles and responsibilities of agencies who typically respond to emergencies
- Provide an opportunity for graduates to develop an in-depth knowledge and understanding of the emergency planning process, crisis management techniques and business continuity management
- Provide for the needs of experienced practitioners in appropriate fields to enhance their career opportunities through a period of academic study

- Provide the opportunity for graduates to obtain a specialized qualification which has a recognition and currency within those agencies with an emergency response function

Entry requirements

Successful applicants must normally hold at least a lower second Honors degree in a related subject. Applicants with a lower class of degree and/or from outside of these areas will be considered individually and are usually interviewed prior to being offered a place. Applicants without a first degree, but who have relevant work experience, are also considered on an individual basis.

Course Content

Typical research projects include:

- best practice and co-ordination of the emergency response in London;
- best practice in the facilitation of PTSD issues in the planning for emergencies; and
- Hazard identification and risk management for emergency planners.

Risk & Disaster Management MBA degree (Subject to Approval)

The MBA in Risk and Disaster Management is a unique program designed to enable practitioners to develop management skills to operate in senior management positions. It is a taught MBA designed to develop the key concepts of business practice, disaster management and risk assessment.

The program allows the opportunity for students to focus their learning on their particular professional development needs. It will develop critical evaluation and the application of key elements of business planning and the management of risk and disasters. The course runs full-time over one year, or part-time up to 3 years. It comprises of ten taught modules and a dissertation.

Course content

The program includes four core business modules:

Strategic Management
Human Resource Management
Financial Analysis
Marketing Management

There are six disaster management modules:

Disaster Theory
Disaster Management
Risk Assessment
Business Continuity Management
Management of Urban Disasters
Research Methods

These modules focus on the industrialized nations but will also deal with global aspects of business, risk and disaster management. Staff delivering the course has a wide range of practice based knowledge and research skills.

Northumbria University, UK

Country: United Kingdom

Department / School:

Course: MSc in Disaster Management and Sustainable Development

Curriculum Description

With each new crisis, there is an increasing need for strengthening the capacity to respond to disasters. This flexible new program has been established by staff with an international reputation in the fields of disaster management and sustainable development. Teaching staff have links with many of the world's leading development and relief organizations.

The program has been designed for maximum flexibility, providing students with the opportunity to develop the following: Knowledge of disaster management and sustainable development including frameworks and skills

for addressing contemporary hazards, disasters and complex emergencies with an emphasis on either post-development or majority world contexts.

The skills required for evaluation and planning in the core areas of early warning, preparedness, immediate and long-term response systems, and sustainability with a focus on; hazard and disaster information systems; bio-physical and political ecological environments of hazard; environmental and human vulnerabilities and resilience; the role of institutions in disaster management; and capacity building in institutional development (international, transnational, governmental and civil societal).

Specialists in environmental/geographical information systems (GIS), physical and mental health in the context of disaster management and development, and UK emergency planning.

Courses Offered in curriculum

Dissertation

The MSc Dissertation is a single piece of work focused on a case study of disaster management and sustainable development. The dissertation will demonstrate ability to apply relevant methods and perspectives to the chosen topic. The dissertation will be supervised by an appropriate dissertation tutor and will not exceed 20,000 words including bibliographical material.

Research Methods for Disaster and Development

The module aims to provide students with an understanding of the methodological issues underpinning research for disaster and development and to equip them with a basic repertoire of techniques and approaches necessary to carry out a research project in disaster and development

On completion of the module the student will be able to:

- Demonstrate a critical understanding of social science research methodologies (assessed by proposal and formative task)
- Construct a feasible and appropriate disaster and development research project design (assessed by proposal)
- Critically evaluate ethical issues arising within their research area (assessed by proposal and formative task)
- Explain the principles of sampling in any research context (assessed by proposal)

The module will be delivered through the e-learning portal and materials will be stored there for student access. Students will be given written lecture notes, PowerPoint presentations, interactive exercises and practical tasks.

Managing Climate Change Risk

Project Management: Approaches and Methods

The module focuses on critical analysis of a range of methods in project planning. The project planning cycle is introduced as a vehicle for implementing policy and programs. The cycle is then analyzed in terms of the components namely identification, appraisal, implementation, monitoring and evaluation. An overview of the three technical components of project appraisal is provided covering benefit-cost analysis, environmental impact analysis and social impact analysis. Special attention is paid to the use of log-frame analysis including SWOT (Strengths, Weaknesses, Threats, and Opportunities) analysis for the preparation of project proposals. Approaches to monitoring, review and evaluation are examined including the deployment of qualitative inquiry. In addressing the above, the influences of different epistemological persuasions are considered.

Themes in Sustainable Development

This module aims to explore the contested paradigm of sustainable development and how it informs policy at

various levels from the international, supra-national, and national to the local. A wealth of case studies will be drawn upon to illustrate the breadth of the subject and the different approaches to sustainable development. Interactive lectures and independent study form the primary learning and teaching methods. The assessment includes a presentation, write-up of the presentation and an essay.

Disaster Risk Reduction and Response

This module aims to explore the contested models of disaster management and how they inform policy at various levels from the supra-national to the local. A wealth of case studies will be drawn upon to illustrate the breadth of the subject and the different approaches to disaster risk reduction and response. Interactive lectures and independent study form the primary learning and teaching methods. The assessment includes a presentation, write-up of the presentation and an essay.

Environmental / Geographical Information Systems

The unit aim is to introduce decision makers who have no, or limited, experience of computer-based techniques of environmental information handling, manipulation, and analysis, to specialist software for decision support in a disaster management and sustainable development context. An important objective of the unit is to introduce concepts of fitness of use, and appropriate applications of data and spatial data processing software in the context of both long term planning for development and short-term response to disasters. This is analyzed from the perspective of different interest groups using GIS to pursue a variety of divergent and/or complimentary goals.

Physical and Mental Health for Disaster Management & Dev

This unit examines approaches to physical, psychological and social well being for both immediate and secondary emergencies. It lays foundations for comparing and contrasting alternative policy strategies in preparedness and responses to emergent health hazards, complex health disasters, and the development of appropriate health care systems. This agenda is based on the need to understand the nature and context of ill health associated with disaster and sustainable development, and appropriate application of principles and practices in health care response relative to different conceptions of 'health'. Using varied critical health incidents from both the developing and developed world, the unit focuses on the central themes of health hazard, health in disasters, and responses to disaster risks and events through health care management. These central themes are explored through the cases of infectious disease, nutrition, post-traumatic stress, social coping mechanisms, emergency health care systems, and the political economy of health. Students from varied backgrounds will be equipped to contribute to policy debates on best practice health management for disaster prevention and sustainable human health.

Approaches to Integrated Emergency Management

The following topics will be taught with particular reference to the developed world urban/industrial systems and with case studies. The major incident plan for a UK city will be used as basis for the desk top training exercises. Where appropriate outside speakers will be involved.

1. The role of training and exercising in the context of emergency preparedness, using examples from the UK.
2. An evaluation of the effectiveness of the types of training techniques available.

3. An evaluation of the roles and responsibilities of various UK disaster management agencies at strategic and tactical levels in response to emergencies.
4. An evaluation of the different types of emergency plan validation used in the UK.
5. An evaluation of the role of training in emergency plan preparation and validation.
6. An evaluation of the methodology for the training of responders in consequence management in a developed world context.
7. An identification of the major perceived problems of incident response including communications and the role of the media.
8. A critical review of the desktop approach to emergency plan validation through participation and review.

Subject Exploration: Disaster and Development

This module comprises a series of tutorials to help guide and monitor student progress on a program of independent learning in the subject area of disaster.

The student will negotiate a Study Plan and Proposal with their supervisor, identifying the types of information (e.g. Internet based policy documents, academic literature, personal communication with key informants, etc) they will be searching; the purpose and aims of the research topic; and the timeline for achieving it.

Directed reading, guided and independent study will be used to enable students to gain a more sophisticated awareness of their chosen study area.

Florida State University

Country: United States of America

Department / School: College of Social Sciences and the Askew School of Public Administration and Policy

Course: Master's Degree in Public Administration with Emergency Management

Curriculum Description

The College of Social Sciences and the Askew School of Public Administration and Policy at Florida State University is currently offering a Master's degree in Public Administration with an Emergency Management Specialization. This program attracts both traditional students and employees in government, business, and non-profit organizations.

The College of Social Sciences and the Askew School have developed strong ties to the emergency management community, through nationally and internationally known researchers and emergency management practitioners on their teaching and research faculty. The emergency management component of this specialization is designed to prepare managers with the skills and knowledge to navigate their organizations through crisis events or to take entry positions within the emergency management field. Students in the emergency management sub-field may simultaneously complete requirements for a five-course graduate certificate in emergency management.

Courses Offered in Curriculum

Required Courses. Select two (2) of the following courses:

- PAD 5352 Environmental Policy and Management
- PAD 5397 Foundations in Emergency Management
- PAD 5398 Emergency Management Planning and Policy
- URP 5425 Methods of Environmental Analysis (or similar course with advisor's approval)
- PAD 5935 Terrorism Preparedness and Response
- PAD 5935 Advanced Topics in Terrorism
- PAD 5041 Public Service Ethics
- URP 5421 Intro: Environmental Planning & Natural

Resource Management

PAD 5335 Strategic Leadership for Communities

Electives: Select three (3) of the following courses (or others within the University) with the approval of advisor:

PAD 5935 Hazards Mitigation Planning and Disaster Recovery

PAD 5935 Contingency Planning

PAD 6300 Governmental Administration in Florida

POS 5698 Environmental Policy

GEO 5146 Geographic Information Processing and Systems

GEO 5345 Disaster Preparedness and Hazards Mitigation

GEO 5287 Water Resource Analysis

URP 5122 Planning Dispute Resolution

URP 5422 Coastal Planning

URP 5427 Environmental Legislation and Policy

URP 5428 Pollution Control

URP 5429 Special Topics: Environmental Planning & Resource Management

URP 5731 Planning of Community Infrastructure

URP 5331 Approaches to Regional and State Planning

ECP 5311 Natural Resource Economics I

ECP 5312 Natural Resource Economic II

ECP 5115 Seminar in Economics of Population

SYD 5145 Population Policy

CPS 5454 Research Seminar in Science, Technology & Environmental Policy

LAW 6470 Environmental Law (take on a S/U basis)

LAW 6520 Administrative Law (take on an S/U basis)

Several courses in environmental engineering are available to persons who have taken a year of chemistry; 4001 Environmental Engineering is a prerequisite to 5616 Environmental Impact Analysis and other courses

Jacksonville State University

Country: United States of America

Department / School: Institute of Emergency Preparedness

Course: Master of Public Administration with a Concentration in Emergency Management

Curriculum Description

Jacksonville State University offers a Master of Public Administration with a concentration in Emergency Management. The concentration balances conceptual knowledge in emergency management with skill acquisition in crisis management, hazard assessment and other analytic and management skills. The public administration curriculum emphasizes traditional core areas of personnel management, budgeting and finance, and organizational theory. A total of 36 graduate semester hours are required for the degree with 15 required hours in Public Administration, 15 required hours in Emergency Management, and 6 hours of approved electives. JSU offers both online and on-campus courses. All requirements for the degree can be met through distance learning. A 15-hour graduate certificate in emergency management is also available. JSU at this time, approved in-state tuition rates for all online graduate students.

Degree Requirements

A total of 36 graduate semester hours is required for this degree; 15 required semester hours in Public Administration courses, 15 semester hours in the concentration and 6 semester hours of approved electives. Public Administration courses are offered via traditional classroom and internet delivery methods. Emergency Management courses are offered via the internet. Students are urged to work with their assigned advisor for appropriate class scheduling.

Courses Offered in Curriculum

- EM 505 Foundations in Emergency Management: History of the profession; contemporary emergency management concepts, functions, and practices for government, nonprofit organizations, and the private sector.
- EM 590 Capstone in Emergency Management: Integration and synthesis of theory and practice for emergency management.
- EM 525 Damage Recovery: Processes for short- and long-term recovery for individuals, families, and communities; provision of recovery assistance by both public and voluntary sectors.
- EM 540 Hazard Mitigation: Mitigation concepts, implementation approaches, and planning.
- EM 545 Emergency Preparedness: Preparedness frameworks and strategies; techniques of emergency operations planning, exercise design and evaluation, and public education.
- EM 555 Disaster Response: Context of disaster response, response functions; assessment, resource mobilization and adjudication, and emergency operations center (EOC) operations.

Metropolitan College of New York

Country: United States of America

Department / School: School of Public Affairs and Administration

Course: Master of Public Administration in Emergency and Disaster Management

Curriculum Description

The Masters of Public Administration in Emergency and Disaster Management is an advanced degree program which opens new career tracks for recent college graduates as well as those looking to change careers, and further develops the knowledge base of professionals already working in the field.

Comprehensive emergency and disaster management is a complex field that requires expertise in multiple areas. This highly-specialized degree will cover the planning, management, logistics, response, relief, recovery and economics associated with managing emergency situations.

This is a 16-month Emergency and Disaster Management Master's degree requiring completion of 45 credits over four semesters of study. Included in the tuition and curriculum is an International Study Abroad component which consists of a 10 day excursion in Israel studying security and participating in emergency management training. To accommodate working professionals, classes meet on Friday evenings and Saturday during the day.

This unique program integrates the College's Purpose-Centered System of Education, and each student will develop actual comprehensive emergency management plans for the organization where he or she is working. More than a thesis, this will serve as a case study and plan of action.

Courses Offered in Curriculum

Over 16 months, our graduate students explore the complex world of emergency and disaster management issues and learn the critical-thinking and decision-making skills necessary to support and supervise comprehensive, integrated and effective management in the event of natural, system-wide, or human-induced crisis.

Through assessment of a broad range of modern disasters and complex emergency situations, the program provides students with a working knowledge of

needs, preparedness, service delivery systems, impact on communities, decision-making and ethics.

Impact of Disaster on Cultures and Communities (MPA 511 SEL) (2 credits)

This course is designed to equip the student with an overview introduction to emergency management, focusing on the effects of disasters on different populations, and the current disaster response measures in place. The class is structured on the lifecycle of emergency management: mitigation, preparedness, response and recovery. Each student is expected to develop a basic understanding of these concepts and the current issues in emergency management, as well as gain insight into the public and private sector methods of managing crisis.

Evaluating Service Delivery Systems (MPA 512 SYS) (2 credits)

The role and function of the emergency manager and the nature of the decision-making process are inevitably tied to organizational structure and philosophy. If emergency manager expect to assess, shape, design, and direct programs effectively, it is essential that they become knowledgeable about the nature of organizations and how organizations behave when influenced by internal and external forces. The class will focus on the study of models of management, including scientific management, public administration, and human relations. Students will examine the various models of management, carry out a comparative analysis of these needs, and use them as a way of understanding the philosophical, organizational, and managerial principles that guide them.

Research and Analysis Methods in Disaster Management (MPA 511 SKI) (2 credits)

The course will give students the tools to research emergency and disaster management problems as diverse as the social aspects of hurricane evacuation, behavior change in employee emergency preparedness programs, and applying a cost dimension to traditional risk assessment. Students will also learn to apply quantitative and qualitative research methods from a range of disciplines, such as sociology, psychology, political science, public administration, and criminal justice to contemporary and traditional emergency management problems.

Economics of Hazards and Disasters (MPA 511 SYS) (2 credits)

This course provides a comprehensive overview of the economic aspects of hazards and disasters through a review of the concepts, analytical tools and policies that exist to aid emergency managers before, during and after emergencies. The course commences with an overview of present-day emergency management, and proceeds to the concepts of business continuity, vulnerability analysis, risk management and the development of a Business Area Impact Analysis (BAIA). From there, students will review the economic costs of terrorism, and the underlying perceptions associated with the notion of risk and learn ways to communicate risks effectively with stakeholders and the public. The first half of the course concludes with an examination of business contingency planning, its vices and virtues.

Semester 2

Identification of Organizational Disaster Needs / Field Experience (MPA 522 PCA/ MPA 522FLD) (3 credits, 2 credits for field)

This Constructive Action course is designed to provide students with an overview of business continuity/emergency operations planning for public, non-profit, and private organizations. Students will apply the Disaster Recovery Institute's first 5 Professional Practices of Business Continuity to create a Business

Continuity Plan for a local business. Students will also complete the FEMA Emergency Management Professional Development Series. The process is designed to be collaborative, to encourage teamwork, and to give students a real-world experience in developing a plan. In later semesters, students will implement and assess the plan.

Organizational and Municipal Continuity Planning (MPA 521 SKI) (2 credits)

This course examines the history of both disaster preparedness research and planning, and culminates with a review of contemporary disaster planning processes and how they can be applied to real-world experiences via the examination of meaningful and purposeful case studies. We begin with a review of the literature that comprises the foundations of disaster preparedness research, and progress through the topics of organizational and governmental considerations in planning and on to a discussion of future trends in these fields.

Public Health Systems Preparedness (MPA 521 SYS) (2 credits)

This course deals with important health and management issues involved in crises and emergencies presented for the non-medical disaster manager. The wide range of medical and health issues inherent to crises and emergencies are described. The course covers topics such as differentiation between natural and man-mediated outbreaks in the community (SARS, influenza, smallpox, E. coli H-157, etc.); Methods for integrating medical, public health and psychological processes into disaster management; Review of health systems implications of nuclear, biological, and chemical disasters. This course is designed to meet the need for a recognized curriculum in the Public Health aspects of disaster care and organized emergency medical services systems.

Semester 3

Initiating and Managing a Disaster Recovery Plan / Field Experience (MPA 532 PCA/ MPA 532 FLD) (3 credits, 2 credits for field)

In the third semester of the Constructive Action, students are expected to implement the disaster plan they developed in the second semester. Students will be involved in all phases of plan implementation at the customer's site; designing an implementation, education, and revision program; developing an ongoing assessment instrument; Creation of a P-D-C-A feedback loop to measure effectiveness of education and real organizational change. Students will be involved with direct customer consulting, education, assessment, and program re-evaluation.

Individual and Collective Responses to Disaster (MPA 532 SEL) (2 credits)

This course will review the impact of various types of disasters on individuals, groups and communities, as well as the various strategies that have been developed to immediately respond to acute stress reactions. The course will review the theory of how disasters affect populations. Students will be able to distinguish between myth about disaster response and how people actually behave. Students will gain an expanded awareness of cultural values and the diversity reflected in American society and elsewhere.

Economic and Social Trends and the Organization of Services (MPA 532 SYS) (2credits)

A topics course organized about the various work settings for emergency management with a focus on how they are similar to the traditional model and how they differ. Includes presentation from federal, local, private sector and not-for-profit perspectives. This course offers

a broad perspective on the various facets of emergency management, the value systems in different work environments, and how emergency managers get resources when competing against other demands. The class examines the major emergency management settings, including government, transit systems, healthcare, financial markets, environmental agencies, public utilities, banking, military, and education.

Private Sector Emergency Management (MPA 531 VAL) (2 credits)

Private sector industry provides well over 90% of critical human and infrastructure support, so proper emergency planning for these organizations is crucial to ensuring the health and safety of the public. This class will focus on the needs of private sector industry, their paradigms, and their shortcomings. There will be a significant focus on best practices case studies and how the private sector is leading the public sector in creating a prepared community.

Information Technology in Disaster Planning (MPA 533 VAL) (2 credits)

This Course reviews explores Information Technology (IT) from three major perspectives: What constitutes IT in Western Society, the integration of IT in the practice and methodology of Disaster Planning, and finally, how IT can be employed to prevent, delay, respond, mitigate, and recover from disasters.

IT in Western Society covers a broad range of technology from large scale mainframe computing environments, integrated networks, and the Internet, to local-area-networks, personal computing, personal digital assistants, and intelligent devices (such as GPS/Ultra-Wide Band RF Transceivers). This section will also describe best practices in regard to IT security, back-up and recovery and full Disaster Planning for the IT assets.

Contemporary Disaster Planning incorporates a wide range of issues, and collects huge amount of data. IT systems support the practice and methodology of Disaster Planning in the collection of data, its assessment in terms of pertinence and use, threat probability and preparedness prioritization.

The employment and deployment of IT for Disaster prevention, response and recovery is explored to include communications, assessment, and consequence management.

Semester 4

Long Range Planning for Disaster Management / Field Experience (MPA 541 PCA/ MPA 541 FLD) (3 credits, 2 credits for field work)

Having experienced the development, implementation, and assessment of the organization's disaster plan, students will chose to analyze one aspect of the previous semesters' process to complete the P-D-C-A model and revise and improve the disaster plan development model.

Terrorism and Disaster Management (MPA 541 SEL) (2 credits)

Students in this course will define terrorism and examine why politically motivated acts of violence occur; Review terrorist groups, tactics and the effects of terrorism (including weapons of mass effect); Review policies and activities aimed at mitigating, preparing for, and responding more effectively to terrorist acts. There will be a focus on the social, psychological and political aspects terrorism and disaster management, with the goal of fostering development of critical thinking and planning skills as they relate to the management of terrorist events.

The Federal Government and Disaster Planning/Response (MPA 541 SKI) (2 credits)

This course is designed to provide students with an overview of the Federal government's role in emergency management and related regulation and processes. With a specific focus on the Federal Emergency Management Agency, students will get an overview of FEMA and its programs, including disaster assistance, the national flood insurance programs, and chemical and radiological preparedness. There will also be a strong focus on the nuts-and-bolts of federally-declared disasters and the funding process for state, local, and citizen reimbursement.

Topics in Emergency Management (MPA 541 SYS) (2 credits)

A topics course organized about the various work settings for emergency management with a focus on how they are similar to the traditional model and how they differ. Includes presentation from federal, local, private sector and not-for-profit perspectives. This course offers a broad perspective on the various facets of emergency management, the value systems in different work environments, and how emergency managers get resources when competing against other demands. The class examines the major emergency management settings, including government, transit systems, healthcare, financial markets, environmental agencies, public utilities, banking, military, and education.

Touro University, California, USA

Country: USA

Department / School: College of Health Sciences

Course: Masters in Emergency and Disaster Management

Curriculum Description

This program is specifically designed for those military officers and others who have completed or will complete the Command and General Staff College. Emergency and Disaster Management Includes a total of 40 credits

Courses Offered in Curriculum

MHE503 Survey of Emergency and Disaster Management

Examine the multi-faceted issues of developing, planning, organizing, and managing disaster programs nationally and internationally. Emphasis of the core components of disaster program will be included: hazard and vulnerability analysis, mitigation and prevention, preparedness, response, and recovery. The morbidity, mortality, and economic impact of disasters will be examined.

MHE514 Psychosocial Aspects of Emergency and Disaster

Examines psychological and social issues of disasters and emergencies. The course will focus on emergency preparedness, the survivor of a disaster, post-traumatic stress disorder, psychological symptoms following trauma, including general anxiety disorder and stress. In addition, psychological aspects of terrorism will be examined.

MHE505 Issues of Terrorism

This course explores the issues of terrorism as they relate to the planners and administrators at the local level, state, and national level. This course will examine intentions and psychological profiles of terrorists, threat analysis, tactical/capability assessment, identification of likely targets, mitigation strategies, planning and policy issues, and technical aspects of chemical, biological

MHE507 Bio-Terrorism

The events of September 11th 2001 and beyond have heightened our concern about the potential use of nuclear, biological and chemical (NBC) weapons by terrorists. This course will serve as a comprehensive

introduction to bioterrorism with emphasis on the potential use and consequences of selected biological agents as weapons of mass destruction (WMD), in particular, the major threat to national security and public health. Prevention, control and response strategies will be addressed along with legal and policy issues. Participants will review and discuss articles and presentations by national and international experts, and debate and discuss the current counter-bioterrorism approaches. Learning competencies will be assessed through case studies and a session long project.

MHE509 Emergency Planning and Methodology

This course focuses on developing the fundamental foundation on which emergency and disaster plans are based at the level of local, state and federal government. Applicability of these plans to businesses and organizations are also discussed. Fundamental and advanced operational principles, policies, and issues involved in emergency and disaster management will be discussed in-depth. The importance of leadership, political, interagency and multi-jurisdictional issues will be emphasized.

MHE511 Emergency Operations

This course examines the planning and execution of emergency operations, which requires extensive interagency cooperation. The roles of fire, police, emergency medical services and other public agencies and volunteer groups such as Red Cross will be examined. The fundamental operational principles involved in emergency and disaster management will be explored, including the identification of problems most typically encountered in the field and developing effective responses.

MHE513 Risk Assessment and Epidemiology

This course examines the causes, effects, and distributional patterns of disasters. Epidemiologic methodology will be explored, including surveillance, loss estimation, risk factors as assessment, countermeasures for reducing losses, and evaluation.

MHE599 Culminating Projects

Development of an independent project that reflects synthesis, integration and application of previously acquired knowledge. The focus on this course is to advance an original point of view by building on other work of others. By the end of the class, each student submits a 15-20 page comprehensive, scholarly project paper and a PowerPoint presentation to all class members via PowerPoint.

MIH560 Fundamentals of Operating War Fighting

The course describes an introduction of strategic concepts and combat health support. Human resources involved, medical supplies including joint doctrines.

MIH561 Advanced Operational War Fighting

The course introduces the students to Foreign Humanitarian Assistance doctrine. The roles of the US military, service roles and functions.

University Of Richmond, Virginia

Country: United States of America

Department / School: School of Continuing Studies

Course: Master of Disaster Science

Curriculum Description

The Graduate Certificate in Disaster Science and the Master of Disaster Science deal with the causation, impact, and outcomes of a wide variety of natural and man-made disasters in an interdisciplinary context. Both programs build on professional technical training and undergraduate education by involving students in the discovery of the theory of disasters and teaching them the research tools needed to discover new knowledge in the field. The framework of these graduate programs is ideal for the individual who needs a more in depth

understanding of disasters in relation to emergency management duties and responsibilities.

Admission Requirements

Students seeking admission to the Graduate Certificate Program in Disaster Science and the Master of Disaster Science degree must have the following:

- A baccalaureate degree from an accredited college or university.

- A grade point average of 3.0 or higher on all college and university academic work attempted. For students who have completed an undergraduate degree in emergency management or a related field, a minimum of two years paid or volunteer experience in the field.

- For students with other majors, a minimum of three years experience in the field.

Courses Offered in curriculum

ESM 503U Research Practicum

Introduction to formal research in emergency services, including guided research project.

ESM 505U Disasters, Characteristics and Physical Impacts

Overview of characteristics of disasters, their impact on population, infrastructure, and economy, and disaster management cycle.

ESM 540U The History of Emergency Management Organizations and Theory,

Will examine how organizations have evolved to protect people, infrastructure, and the environment from war and disasters, and how changes in organization and threat have related to changes in the theory of how to respond to such events.

ESM 509U Social Dimensions of Disasters

Examines how populations respond to disasters including such areas as response to warnings, evacuation reactions, and looting. Suggests strategies for management of formal and emergent organizations and disaster stressors on individuals, organizations, and groups. Discusses development of effective programs for management of community change to increase disaster resistance.

ESM 541U The Politics of Disaster

Will examine how disasters have shaped political process and institutions, and how political considerations at the organizational, national, and international level have influenced disaster responses.

ESM 542U Economic Impacts of Disaster

Will examine impact of disasters on economy of impacted areas and relative costs and benefits of various strategies for disaster mitigation, response, and recovery.

ESM 543U Religion in Disaster

Examines the role of disasters in shaping religious beliefs, how modern religions transmit memories of ancient disasters, and the role of religion in preparing for, responding to, and recovering from disaster events.

ESM 544U The Law of Disaster

Examines the structure and sources of national and international law and identifies major trends affecting both. Case studies will be used to examine significant incidents and their legal outcomes. Students will be presented with sources and methods for research applicable to disaster laws and the impact of law on governmental service delivery.

ESM 595U Hazards and Threats for the Future

Examines the future of disasters and their management in the context of long-term political, environmental, technological, economic and social change. Identifies current methods for futures analysis and provides a framework for developing tools and resources to design future missions and strategies for professionals in both emergency management and business continuity and their organizations. Develops an understanding of the

relationships of vision to the future and relates that to the department of programs to protect lives, property and the environment at any level. *Prerequisite:* For undergraduates, completion of required core and focus courses.

ESM 546U Concentration I

Review of current literature, theory, management practices, and evolving issues of a particular area of professional application. Comparison with other disaster management disciplines. Areas of concentration may include governmental emergency management, business continuity, health care contingency planning, and voluntary agency disaster response. *Prerequisites:* ESM 546U is prerequisite to ESM 547U.

ESM 547U Concentration II

Review of current literature, theory, management practices, and evolving issues of a particular area of professional application. Comparison with other disaster management disciplines. Areas of concentration may include governmental emergency management, business continuity, health care contingency planning, and voluntary agency disaster response. *Prerequisites:* ESM 546U is prerequisite to ESM 547U.

ESM 548U Thesis

Individual research and writing of a thesis representing original research in the field of disaster science under the supervision of a director and two committee members from the SCS graduate studies faculty.

2) PART II - DISTANCE LEARNING & ONLINE COURSES

Indian Institute of Ecology and Environment, New Delhi

Country: India

Department / School:

Course: Master of Science in Disaster Mitigation

Curriculum Description

It is Two Years Distance Learning Program with Annual Examinations to be held in June / December every year.

Examination : To be conducted every year in June and in December at Allahabad, Ahmedabad, Aurangabad, Bangalore, Bhopal, Bhubaneswar, Bokaro, Chandigarh, Chennai, Delhi, Dehradun, Gangtok, Ghaziabad, Gorakhpur, Guwahati, Hyderabad, Imphal, Indore, Jaipur, Jammu, Jamshedpur, Kathmandu, Kohima, Kolkata, Kota, Lucknow, Mumbai, Nagpur, Panjim, Pathankot, Patna, Port Blair, Pune, Raipur, Ranchi, Raipur, Shimla, Shillong, Srinagar, Trivandrum, Udaipur, Varanasi, Vishakhapatnam and Wokha.

Courses Offered in Curriculum

First Year

Introduction to Disasters Control

Hydrological, Coastal and Marine Disasters

Atmospheric Disasters

Geological, Mass Movement and Land Disasters

Second Year

Forests Related Disasters

Wind and Water Driven Disasters

Technological Disasters

Master's Thesis

Contemporary Natural and Man-made Disasters

Nature, Humanity and Development, Disruption of Development by Disasters, Loss of Resources, Interruption of Programs, Impact on Investment Climate, Impact on Non-Formal Sector, Political Destabilization, Development as Causes of Disasters, Development Opportunities Afforded by Disasters. Fundamentals of Disasters, Causal Factors of Disasters, Poverty, Population Growth, Rapid Urbanization, Transitions in Cultural Practices, Environmental Degradation, Lack of Awareness and Information, War and Civil Strife. Phases

of Disaster, Rapid Onset Disasters, Slow, Onset Disasters, Characteristics of Particular Hazards and Disasters, Earthquakes, Tsunamis, Tropical Cyclones, Floods, Droughts, Environmental Pollution, Deforestation, Desertification, Epidemics, Chemical and Industrial Accidents. Other Disasters, Social and Political Imperatives, Displaced Persons, The Role of the UN in Complex Emergencies.

Risk Assessment and Disaster Management

Objectives of Assessment, Evolving Objectives of Assessment, The Assessment Process, Assessments for Different Disaster Types, How Assessment Data is Used, Destructive Capacity, Disaster Due to Hydrological and Meteorological Phenomena, Earthquake Disasters, The Nature, Extreme Event Analysis, Hazard Ecology, Environmental Health Risks, Chemical Load, Cancer and the Environment, Nervous Systems, Reproduction, The Immune System, Proof and Limits, Future Diseases, Risk Adjustment, Choice, Loss Acceptance, Disaster Aid, Insurance, Risk Management, Infectious Organisms, Willingness to Pay, Feeding Mega doses, The Importance of Coordination and Information, Rehabilitation and Reconstruction, Priorities and Opportunities in Rehabilitation and Reconstruction, The Danger of Planning and Conducting Reconstruction in Haste

Policy initiatives and future prospectus

Nature of Responses to Geohazards, The International Decade for Natural Disaster Reduction, Policy for the Reduction of Disaster Consequences, Problems of Financing and Insurance, Trends in Climatology, Meteorology and Hydrology, Trends in Seismic Activity, Problems Related to Insurance, Role of the Civil Defense During Disasters, Training of Emergency Management Personnel, UN Draft Resolution on Strengthening of Coordination of Humanitarian Emergency Assistance, The General Assembly, Guiding Principles, Prevention, Preparedness, Early Warning, Stand-by Capacity, Consolidated Appeals, Coordination, Cooperation and Leadership, Continuum from Relief to Rehabilitation and Development, Figure Perspectives, Importance, Prospects, The Challenges and Opportunities.

Case Studies

Nepal, National Hazards, Role of CDRC Organization, Recent Developments, Bangladesh, Introduction, Stock Taking, Disaster Management and Communication, Organization of Preparedness and Prevention Planning, Guatemala, El Salvador, General Description of El Salvador, Diagnostic of Natural Disasters in El Salvador, Prevention and Corrective Measures Implemented to Face Natural Disasters

Disaster Mitigation

Targeting Mitigation Where it has Most Effect, Actions to Reduce Risk, The Menu of Mitigation Actions, Classification of Mitigation Measures, Disaster Mitigation as a Development Theme, Disaster-related Policy Goals of UNDP and UNDRO, Appraising Disaster Mitigation Needs, Policies and Capacity, Elements to be Explicitly Considered During the Early Stages of Country Program Development, Sources of Information ; Needs for Technical Expertise, Project Identification and Formulation, Disaster Risk Appraisal of All Projects in Hazardous Area, Disaster Risk Reduction Planning Checklist.

Paper -II: Hydrological, Coastal and Marine Disasters Flood Hazards, Control and Management

Floodplains, Causes of Floods, Floods and Forests, Floods and Environmental Risks, Embankments: Some Technical Problems, the World Bank's Action Plan, Floods and Event Modification, Flood Diversion

Measures, Floods and Droughts, Floods and Economic Issues

Tsunami and El Nino: Warn and Avoid, Tsunamis, El Nino.

Water and groundwater hazards

Water Hazards, The Resource, The Human Framework, Groundwater Rise, The Scale of the Problem, Agriculture, Land use and Water, Industrial Water Use, Causes of Rising Groundwater, Urban Areas and Water, Urban Water Supply, Urban Effluent, Cities and Stream flow, Water Impoundment.

Sea level rise

Measuring Sea Level Rise, Future Sea-Level Change Tendencies, Impacts of Sea Level Rise, Impacts on the Environment and Engineering Countermeasures, Impacts on South-Asian Region, Land and Coastline Features of the SAS Region, Ocean Circulation and SW Monsoon, Tropical Cyclones and Storm Surges, Energy and International Collaboration, Impacts on Delta Areas, Coastal Zone Management and Sea Level Rise, Coastal Zone : Characteristics and Importance, Environmental Disruptions and their Implications, Management Issues, Summary and Conclusion, Coastal Zone Mitigation Strategies, Responding to Sea Level Rise, A Systems and Co-evolutionary Perspective for Sustainability, Water Table Control, Mitigation Measures.

Coastal and Marine Disasters

Techniques of Marine Pollution control

Paper - III: Atmospheric Disasters

Greenhouse Effect and global climate

Air Pollution and Acid Rain

Ozone depletion

Global and regional perspective on global warming

Paper - IV: Geological, Mass Movement and Land Disasters

Geological and Mass Movement Disasters

Earthquake

Description of Phenomenon, Ground Shaking, Damage Potential of Ground Shaking, Characterization of Ground-Motion, Earthquakes Scales : Magnitude and Intensity, Landslides, "Quick" clays, Liquefaction, Information, Assessment and Mapping, Perception and Prediction of Earthquake, Prediction, Geological and Geographical Analysis, Strength, Movements, Adjustments, Vulnerability Modification Adjustments, Globe Experiences, Eastern Mediterranean, Magnitude and Ground Motions, Asia, Displacement Studies, Seismotectonic Studies, Equatorial Indian Ocean Seismicity, Internal Stresses Due to Interplate Deformations, Middle East, Cameroon, Data Acquisition, Events Detected, Lake Events, The Influence of Subsoil, The Vulnerability of Buildings, Building - Subsoil Interaction, Earthquake Recurrence, Catastrophic Loss, Mitigation Plan, Risk, Approaches, Damage Versus Earthquake Resistance, Priority, Earthquake Disaster Mitigation Program Components, Disaster Mitigation Program in India, Emergency Action Plan, Conclusions, Rescue and Relief, Disaster Preparedness, Problems, Management of Rescue and Relief, Deployment of Search and Rescue Teams, Consequences and Insurance, The Direct and Indirect Cost, Risk and Insurance, Risk Analysis, Spreading the Risk, General and Special Problems

Volcanism

Description of Phenomenon, Monitoring and Warning, Volcano Monitoring, Using Satellite Images for Volcano Monitoring, Detection and Monitoring of Eruption Plumes, Weather Satellite Images, Eruption Early Warning from Satellites, Geographical and Geological Analysis, Primary, Secondary, Adjustments, Event Modification, Vulnerability Modification, Global Experiences, Ecuador,

Cotopaxi Volcano, Role of PHIVOLCS in Geologic Hazard Prediction and Mitigation, Implementation, Improvements, Colombia, Indonesia, Prediction and Containment, Impact Analysis, Reducing Structural Vulnerability, Risk Mitigation and Training.

Mass-movement hazards

Landslides, Rock falls, Avalanches, Mudflows and Glaciers, Landslides and Rock-falls, Geology, Landslide Information, Snow Avalanches, Event Modification, Vulnerability Modification, Mudflows, Avalanches and Glaciers, Glacier Fluctuations, Case Histories from the Cordillera Blanca, Peru, Types of Glacier Hazard, Laguna Paron, Risk Assessment, Landslide Hazard Potential Map (LHPM), Landslide Hazard Grading (LHG), Geotectonic Conditions, Tectonic Conditions, Final Landslide Hazard Potential (FLHP) Values, Susceptibility Maps, Disaster Mitigation, Zonation Mapping, Instrumentation and Monitoring, Stabilization, Perspectives, Disaster Management, Some Techniques for Reducing Landslide Hazards.

Droughts and famines

Droughts, Droughts Vulnerability Assessment, Vulnerability Assessment, Mitigation Strategy, Drought Types and Responses, Resource Management During Droughts, Present Drought Management System in the States, Development of Drought Plan, Assessment System, Drought Identification, Drought Monitoring, Task Force for Drought Impact Assessment, Response System, Drought Mitigation Mechanism, Drought Preparedness

Paper - V: Forest Related Disasters

Biodiversity Extinction

Deforestation and loss of biological diversity

Measure to Conserve Biological Diversity, Combating Deforestation: Basis for Action, Activities, Means of Implementation, Activities, Means of Implementation, Means of Implementation, Means of Implementation.

Paper - VI: Wind and Water Driven Disasters

Introduction

Tropical Cyclones, Water Related Hazards, Cyclonic Storms in Bay of Bengal, Storm Surges in Bay of Bengal, Impacts of Cyclonic Storms Along East Coast of India, Coastal Floods, Intensification of Hazards Due to Human Interference, Management, River and Coastal Floods, Temperature Extremes and Wildfires, Physiological Hazards.

Flood forecasting mitigation planning and management

Flood Forecasting, Methods of Flood Forecasting, Case Study of Narmada Basin, Mitigation Planning in a Flood-Prone Area, The Phenomenon, Effects of the Phenomenon, Options, The Indian Scenario, Past Scenario, Conclusions and Recommendations, Flood plain Management, Characteristics and Identification, Measures to Mitigate Flood Damage, Economic Considerations, Flood Hazard and Risk Assessment, Legal Aspects, Institutional Arrangements, Case Studies, Country reports, Applicability to the ESCAP Region, Flood Management, General Flood Management Model, Integrated Flood Management Information System (IPMIS), Major Steps in IFMIS Development, IFMIS Features, Implementation of IFMIS in Orissa, Principles of Flood Plain Management, Term Defined, Risk-Reduction Measures for Flood-Prone Areas, Flood-prone Areas.

Tropical cyclones

Tropical Cyclones, Structure of Tropical Cyclone, Disaster Management and Mitigation Measures, Nature of Tropical Cyclones, Cyclone Experience of Bangladesh, Preparedness Measures, Public Information Through Media B, Public Response, Relief and Rehabilitation.

Storms, hurricanes, tornadoes, lightning and frost disasters

Thunderstorms, Severe Winter Storms, Severe Summer Storms, Causes and Types of Floods and Associated Hazards, Vulnerability of Floods and Tropical Storms, Flood and Storm Damage, Homelessness and Infrastructure Disruption, Health Effects, Mitigation and Preparedness Measures, Conclusions, Hurricanes, Tornadoes, Lightning, Frost Hazards in Agriculture, Wildfire Hazards, Frost Hazards on Highways.

Paper - VII: Technological Disasters:

Mining disasters

War, chemicals and the environment

Case studies

International responses and action plans

Paper - VIII: Master's Thesis

All admitted students will be working on a particular topic approved by the Institute for preparing the Master's Thesis to be submitted before appearing in the second year examination. The topic of the Master's Thesis may be related to contemporary, natural and man-made disasters, war and civil strife, epidemics, risk assessment, disaster mitigation and management, earthquake, flood hazards, hydrological disasters, dam bursts, tsunami and el nino, ground water hazards, sea level rise, marine pollution, coastal disasters, atmospheric disasters, greenhouse effect, ozone depletion, acid rain, global warming, geological disasters, volcano monitoring, landslides, rock falls, mudflows, glaciers, land degradation, droughts, famines, desertification, wildfires, deforestation, tropical cyclones, flood forecasting, storms, frost and mining disasters.

(4)Certificate Courses Curriculum World Wide

1) PART I - ON CAMPUS COURSES

George Brown College Country: Canada

Department / School: Centre for Continuous Learning

Course: Emergency Management Certificate

Curriculum Description

George Brown College, Centre for Continuous Learning, will offer in January 2006 its Emergency Management programs consisting of Continuing Education certificates and courses in Emergency Response and Business Continuity. The program will be offered on a part-time basis, and by online distance education, for working professionals. Courses will be taught by emergency management and disaster preparedness specialists and guided by an advisory board of emergency management experts.

The Emergency Management certificates cover critical elements of disaster preparedness: mitigation, response and recovery. Each certificate is sector and/or discipline specific in its focus.

Compulsory Courses

Emergency Management Concepts and Principles

Hazards and Risk Assessment

Crisis Communication and Information Management

Mitigation, Response and Recovery

Terrorism

Course: Incident Command Management Certificate

Curriculum Description

Enhances command-post leadership and communication skills. This certificate covers critical thinking, strategic decision making and tactical deployment, using case studies, individual and group exercises and classroom simulations.

Compulsory Courses

Emergency Management Concepts and Principles

Incident Command – Systems, Operations and Leadership

Command and Control – Disaster Response

Mass Casualty Incident Command
Terrorism

Course: Safety, Security and Response to Terrorism Certificate

Curriculum Description

The certificate will apply principles of emergency management to potential crisis caused by terrorist activities. Learn the roles and responsibilities of different groups – including first responders, security officers and community-elected and appointed officials at all levels – in preparing for, responding to and recovering from terrorist attacks.

Compulsory Courses

Emergency Management Concepts and Principles
Our Evolving New World Reality
Canada's Integrated Security System
Mitigation, Response and Recovery for Weapons of Mass Destruction
Mitigation, Response and Recovery to Eco-, Agro-, and Bio-terrorism
Disasters, Terrorism and the Media

Course: Public Health Emergency Management Certificate

Curriculum Description

Students will Gain knowledge and skills in public health emergency management with this certificate emphasizing command-post operations, crisis communication and surveillance and assessment. Examine government infrastructure and how multiple health services collaborate and coordinate.

Compulsory Courses

Concepts and Principles of Public Health in a Disaster Incident Command – Systems, Operations and Leadership
Surveillance and Assessment in Public Health Emergencies
Public Health Crisis Communication

Course: Psychology of Disaster Certificate

Curriculum Description

This certificate teaches the knowledge and skills for providing short and long term social and psychological reconstruction in disaster-affected communities. Review the principles and concepts of disaster psychology. Learn to recognize responses to trauma and how to interpret behaviors within a cultural context. Develop the skills and techniques critical to debriefing exercises.

Compulsory Courses

Emergency Management Concepts and Principles
Disaster Psychology Concepts and Principles (*under development*)
Establishment of Psychosocial Reconstruction Operations (*under development*)
Depression, Psychosis and Post-traumatic Stress Syndrome (*under development*)
The Art of Rebuilding (*under development*)

Course: Mass Transit and Disaster Management Certificate

Curriculum Description

Gain knowledge and skills in the management of mass transit disasters. This certificate covers principles and concepts of emergency management and existing national, provincial and local regulations. Explore risk assessment techniques and how to pinpoint vulnerabilities in mass transit infrastructure.

Compulsory Courses:

Emergency Management Concepts and Principles
Incident Command – Systems, Operations and Leadership
Security of Mass Transit
Mass Transit Disaster Response and Recovery

Justice Institute of British Columbia

Country: Canada
Department / School:
Course: Emergency Management Certificate

Curriculum Description

The Justice Institute of British Columbia is offering a Certificate in Emergency Management. The certificate program uses the most up-to-date practical and theoretical training required to train students to fill the increasing need for more emergency management professionals. Specific aspects of emergencies are examined from a management, operations, logistics, and human perspective.

The student's progress is constantly monitored during the program. The minimum level of achievement in each course is 75%. A total of 15 credits or 210 hours of training is required to obtain a Certificate in Emergency Management.

Key Objectives and Outcomes

The knowledge and skills to work effectively in the area of emergency management
Career development opportunities previously unavailable due to the lack of a professional credential
Standards of qualification to support the achievement of competencies in the areas of emergency management

Courses Offered in Curriculum

Required Courses

Introduction to Emergency Management
Planning Process
Hazard, Risk & Vulnerability Analysis
Developing Emergency Preparedness

Programs

Incident Command System 1-100
Emergency Operations Centre Level 1
Emergency Operations Centre Level 2
Emergency Evacuations
Exercise Design
Resolving Conflict in the Workplace or Dealing with Interpersonal Conflict
Final Assignment

Elective Courses

Emergency Operations Centre Level 3 – Operations
Emergency Operations Centre Level 3 – Planning
Emergency Operations Centre Level 3 - Logistics
Incident Command System 1-200
Incident Command System 1-300
Tabletop Exercise Workshop
Functional and Full Scale Exercise Workshop
ESS Reception Centre Operations
ESS Group Lodging Operations
Situational Leadership

York University

Country: Canada
Department / School: School of Administrative Studies
Course: Professional Certificate in Emergency Management

Curriculum Description

York University, School of Administrative Studies, offers a Professional Certificate in Emergency Management. The certificate program is designed to address core skills and knowledge, and the balance between research, theory and practice required in this vitally important field. Through lectures, case studies and class discussions, students will develop:
- The background knowledge needed to place the theory and practice of emergency management within a larger social context.

- Knowledge of the various hazards faced by communities, including natural, human and technological risks

- An understanding of the emergency management cycle, including mitigation, prevention, preparedness, response and recovery.

The ability to read, interpret, prepare and implement emergency management plans, policies and procedures. The ability to work as a member of a team while also providing effective leadership.

The certificate enables students to seek a career in Emergency Management, people who will be working in an area involving Emergency Management issues and anyone interested in knowing more about his increasingly-prominent area of public concern.

Courses Offered in Curriculum

Introduction to Administrative Studies	3 credits
Introduction to Organizational Behavior	3 credits
Resources Management	3 credits
Management	3 credits
Fundamentals of Emergency Management	3 credits
Emergency Management: Hazard, Vulnerability and	3 credits
Risk Assessment	
Emergency Management: Mitigation, Preparedness,	3 credits
Response, Recovery	
Business Continuity	3 credits
Emergency Management Communications	3 credits
Leadership and Interpersonal Skill	3 credits
Environment and Health: Social and Political	
Dimensions	3 credits
Environmental Disasters	3 credits
Technological and Human-Induced Disasters	6 credits
Multilevel Governance (in development)	3 credits

Indira Gandhi National OpenUniversity

Country: India

Department / School:

Course: Certificate in Disaster Management

Curriculum Description

Eligibility: 10+2 or its equivalent

Duration: Minimum 6 months Maximum 2 years

The program aims at providing knowledge to the learners in the areas of disaster preparedness, prevention, mitigation, relief, reconstruction and rehabilitation. The program is of use to NGO functionaries and volunteers; military, para-military, police, home guards, civil defense personnel; professionals such as - Geologists, Scientists, Meteorologists, Engineers, Foresters, Fire-service personnel, Administrators, Government and Public Sector Undertakings officials, Rural Development Functionaries; Urban Government Officials; Primary Health Centers Functionaries; etc. The Program consists of 16 credits.

Courses Offered in Curriculum

Foundation Course in Disaster Management

Disaster Management: Methods & Techniques

Touro University International

Country: United States of America

Department / School: College of Health Sciences

Course: Certificate in Emergency and Disaster Management

Curriculum Description

Comprehensive emergency and disaster management is a complex field that requires expertise in multiple areas. Most emergency professionals are trained in the procedures for successfully managing the typical emergencies within their own professions, such as fires,

earthquake, flooding, hurricanes, and radiation or highway accidents. However, preparation for responding to multi-faceted emergencies, such as the World Trade Center attack, is often limited. Responding to the emerging demand, TUI has developed a state of the art program in emergency response and disaster management. The Certificate in Emergency and Disaster Management program requires completion of sixteen semester credits. These four four-unit classes may be completed in six months if the student completes two classes in each of two twelve-week sessions.

Courses Offered in Curriculum

BHS 411 - Issues of Terrorism

This course examines the history and types of terrorism, various terrorist groups, and issues of terrorism as they relate to the planners and responders at the local level. Concepts of planning for a terrorist incident are presented with an emphasis on the integration of emergency operation

BHS 413 - Survey of Emergency and Disaster Management

Examines the multi-faceted issues of developing, planning, organizing, and managing disaster programs at the local level. The core components of a disaster program will be included: hazard and vulnerability analysis, mitigation and prevention, preparedness, response, and recovery.

BHS 417 - Emergency Planning and Operation

The course deals with the four core methodologies involved in emergency preparedness and response: Emergency Contingency Planning, Emergency Operation Planning, Incident Action Planning and Demobilization Planning. - The before, during and after phases of emergency planning and management. The course emphasizes the importance of political, interagency and multi-jurisdictional issues as well as incident stress. Emergency Operations examines the roles of fire, police, emergency medical services and other public agencies and volunteer groups like the Red Cross in emergency situations and disasters. The course focuses on the fundamental operational principles involved in emergency and disaster management, identifying the problems most typically encountered in the field and developing effective responses.

BHS 419 - Risk Assessment

Environmental risk assessments are a tool to determine if contaminant releases, either current or future, pose unacceptable risk to human health or the environment. They are performed under Superfund regulations to support decision-makers in the selection of the cost-effective, risk-reducing cleanup decisions. In addition, risk assessments evaluate disposal criteria for landfills and the allowable emissions from process equipment. The guidance for risk assessment is provided by federal and state agencies. In this course, the focus will be on the methods established by the US EPA to calculate the risk posed to human health under Superfund and other federal regulations. In addition, the fundamentals of management of risks will be presented.

Course: Certificate in Emergency and Disaster Management

Curriculum Description

If you are interested in the Graduate Certificate in Emergency and Disaster Management, you need to pose at least a baccalaureate degree. To be eligible for the Graduate Certificate, you should take all 4 courses in Emergency and Disaster Management.

Courses Offered in Curriculum

MHE 505 - Issues of Terrorism

This course explores the issues of terrorism as they relate to the planners and administrators at the local level,

state, and national level. This course will examine intentions and psychological profiles of terrorists, threat analysis, tactical/capability assessment, identification of likely targets, mitigation strategies, planning and policy issues, and technical aspects of chemical, biological, and nuclear weapons.

MHE 507 - Bio- Terrorism

The events of September 11th 2001 and beyond have heightened our concern about the potential use of nuclear, biological and chemical (NBC) weapons by terrorists. This course will serve as a comprehensive introduction to bioterrorism with emphasis on the potential use and consequences of selected biological agents as weapons of mass destruction (WMD), in particular, the major threat to national security and public health. Prevention, control and response strategies will be addressed along with legal and policy issues. Participants will review and discuss articles and presentations by national and international experts, and debate and discuss the current counter-bioterrorism approaches. Learning competencies will be assessed through case studies and a session long project.

MHE 509 - Emergency Planning and Methodology

This course focuses on developing the fundamental foundation on which emergency and disaster plans are based at the level of local, state and federal government. Applicability of these plans to businesses and organizations are also discussed. Fundamental and advanced operational principles, policies, and issues involved in emergency and disaster management will be discussed in-depth. The importance of leadership, political, interagency and multi-jurisdictional issues will be emphasized.

MHE 511 - Emergency Operations

This course examines advanced topics in human resource management including: managing in a unionized environment, worker's compensation, risk management, incentive plans, downsizing management, growth management, and pension plans.

MHE 513 - Risk Assessment and Epidemiology

This course examines the causes, effects, and distributional patterns of disasters. Epidemiologic methodology will be explored, including surveillance, loss estimation, risk factors as assessment, countermeasures for reducing losses, and evaluation. In addition, the fundamentals of management of risks will be presented.

University of North Carolina

Country: United States of America

Department / School: UNC School of Public Health

Course: Certificate in Community Preparedness and Disaster Management

Curriculum Description

The School of Public Health at UNC-Chapel Hill has developed an online certificate program to provide community leaders in public health, health services, emergency management, emergency medical services, fire, law enforcement and other disaster responders with the opportunity to enhance their knowledge of management systems used to prepare for, and to respond to, natural and man-made disasters, including terrorism. Even though this is a graduate-level program, individuals with substantial experience in public health, health services, and disaster response services who do not have a bachelor's degree may take these courses. Certification requires the completion of four 3-hour courses and provides mentoring in obtaining the optional 1-credit hour CEM elective through IAEM, which are offered through a mix of on-campus and distance learning activities.

Courses Offered in Curriculum

The four core courses are:

HPAA 420 – Community and Public Health Security: assigned to teach students about local, state and federal systems, including FEMA, CDC and state emergency management systems.

HPAA 421 – Community and Public Health Disasters: Focuses on the science and agents of hazards, such as biological, chemical, weather and radiological hazards.

HPAA 422 – Analytic Methods : Designed to teach students the methods of assessing, designing and evaluating disaster management systems, including forensic epidemiology, risk assessment, and cost/benefit analysis

HPAA 423 – Disaster Management Issues: Designed to expose students to current issues in disaster management, including evacuation, recovery, mitigation and crisis communications.

HPAA 496 – CEM Certification: Structured approach to obtaining credential as a Certified Emergency Manager (CEM) ® through the International Association of Emergency Managers (IAEM).

2) PART II - ONLINE AND DISTANCE LEARNING COURSES

Emergency Management Academy of

New Zealand

Country: New Zealand

Department / School: Tai Poutini Polytechnic

Course: Level 2 and Level 4 Certificate in Emergency Management

Curriculum Description

The Emergency Management Academy of New Zealand in association with Tai Poutini Polytechnic is offering two Certificates in Emergency Management. The purpose of the level 2 certificate is to prepare front line emergency management personnel for operational service in civil defense emergency in a range of chosen functions from welfare, flood protection, storm response, medical response, transportation, emergency operations centre support disaster rescue, communications and many others. Level 4 prepares the team leaders to assume a supervisor role in a range of chosen functions such as welfare, flood protection, storm response, disaster rescue, communications, emergency operations centre support, transportation, community coordination and medical response. Team Leaders will also receive training in generic management functions including volunteer coordination, training and leadership. The certificates are designed for front line emergency service personnel, civil defense emergency management volunteers and personnel and humanitarian aid workers.

Level 2 Certificate in Emergency Management requires 51 credits to complete and the Level 4 Certificate in Emergency Management requires 60 credits.

The certificates are delivered part-time over a year through a series of short courses supplemented with distance education packages. Dates for many of the courses are available from courses.emanz.ac.nz. Excluding national courses, the program is typically delivered regionally at clients facilities, unless otherwise agreed.

Courses Offered in Level 2 Curriculum

Compulsory Section

CIM2 Introduction to CIMS

OPS1 Introduction to CDEM

OPS3 Personal Readiness

OPS4 Health & Safety

OPS5 Stress Management

OPS18 Operate Two Way Radio

OPS27 CDEM Incident Reporting

Elective A - Course Components

OPS7 Mass Casualty Triage
 OPS8 Urban Search & Rescue: Awareness
 OPS9 General Rescue
 OPS12 Emergency Welfare
 OPS14 Domestic animal welfare
 OPS15 Flood safety
 OPS16 Flood response
 OPS17 Movement Control
 OPS33 Storm Response
 OPS19 EOC Support
 OPS2 Aircraft Safety
 OPS21 Urban Navigation
 OPS22 Emergency response Driving
 OPS30 Operate CDEM Communications
 OPS31 Establish CDEM Communications
 OPS57 Flood Response (Control) 2
 TEC1 Rope Rescue Awareness
 TEC2 Rope Rescue Responder
 TEC3 Rope Rescue Technician
 TEC4 Rope Rescue Specialist
 TEC6 Low Angle Rescue
 TEC7 Highline Rescue Systems
 TEC9 Swift water Responder
 TEC10 Swift water Technician
 TEC11 Swift water Advanced

Elective B - Distance Components

OPS6 Process CDEM information
 OPS10 Knowledge of CDEM rescue
 OPS11 Medical ethics & rights
 OPS13 Cultural communication
 OPS20 Emergency driving knowledge
 OPS28 Confined space safety
 OPS29 Safety at fire and emergency incidents
 OPS32 Height Safety
 OPS34 CD Controller Powers
 OPS35 Knowledge of training agreements
 OPS36 Conduct operational briefings
 OPS37 Conduct formal meetings
 OPS38 Exercise management

Courses Offered in Level 4 Curriculum
 Compulsory Section
 OPS34 Knowledge of CDEM Controller
 OPS36 Conduct operational briefings
 OPS49 Leadership
 CIM4 Apply CIMS

Elective A - Course Components

OPS7 Mass Casualty Triage
 OPS8 Urban Search & Rescue: Awareness
 OPS9 General Rescue
 OPS12 Emergency Welfare
 OPS14 Domestic animal welfare
 OPS15 Flood safety
 OPS16 Flood response (control)
 OPS17 Movement Control
 OPS33 Storm Response
 OPS19 EOC Support
 OPS2 Aircraft Safety
 OPS21 Urban Navigation
 OPS22 Emergency response Driving
 OPS30 Operate CDEM Communications
 OPS31 Establish CDEM Communications
 OPS46 Workplace Trainer - Introduction
 OPS48 Workplace Assessor
 OPS50 Emergency Community Coordination
 OPS52 Media Liaison - Basic
 OPS53 Rescue Command Tactics
 OPS57 Flood Response (Control) 2
 TEC1 Rope Rescue Awareness
 TEC2 Rope Rescue Responder

TEC3 Rope Rescue Technician
 TEC4 Rope Rescue Specialist
 TEC6 Low Angle Rescue
 TEC7 Highline Rescue Systems
 TEC9 Swift water Responder
 TEC10 Swift water Technician
 TEC11 Swift water Advanced

Elective B - Distance Components

OPS10 Knowledge of CDEM rescue
 OPS11 Medical ethics & rights
 OPS13 Cultural communication
 OPS20 Emergency driving knowledge
 OPS28 Confined space safety
 OPS29 Safety at fire and emergency incidents
 OPS32 Height Safety
 OPS35 Knowledge of training agreements
 OPS37 Conduct formal meetings
 OPS38 Exercise management
 OPS42 Administer CDEM volunteer unit
 OPS43 Develop volunteer support program
 OPS44 Knowledge of NZ volunteer framework
 OPS45 Manage spontaneous volunteers
 OPS51 Supervise CDEM welfare centre
 OPS54 Supervise CDEM response
 OPS59 Declare a state of emergency

Technikon South Africa
 Country: South Africa
 Department / School: Institute for Public Management Development
 Course: Certificate course in Disaster Management

Curriculum Description
 The Institute for Public Management Development in partnership with the Disaster Management Institute of Southern Africa (DMISA), Cranfield University (UK) and the University of Wisconsin (USA) offers Certificate Courses in Disaster Management. These certificate courses are the only of its kind in Southern Africa and address all the relevant issues for the South African context.

Course Objectives
 The principal aim of this course is to train individuals in public and private institutions in various issues relating to disaster management. Special emphasis is placed on the specific disaster profile of each region/province and issues relating to vulnerability and risk assessment, prevention, mitigation, preparedness, rehabilitation and reconstruction and relevant legislation.

Who should enroll?
 The different options are tailor-made for persons working in the field of disaster, risk and emergency management in either the public or private sector such as: Disaster managers, Risk managers, Development officials, Government officials involved in Disaster management, Paramedics, Fire Department personnel, Police officers, Health officials, Traffic and municipal security personnel, Town Planners, NGO's, CBO's, Private security and rescue companies. For those planning a career in disaster management, there is no better capacity building program than the Certificate in Disaster Management at Technikon SA.

Curriculum
 The certificate course consists of **five (5)** different Options. A student may enroll for any number of these Options at any given time although it is advised that no more than two (2) is taken simultaneously. After the completion of each Option students will receive a jointly certified certificate for that Option. After the successful completion of any three (3) Options students will receive a **Technikon Diploma in Disaster Management**. Option

1 is compulsory for all **first-time** enrolments. Students may choose from the following options:

Option One (Compulsory for first time enrolments)

Overview of Disaster Management
Disasters & Development
Disaster Preparedness
History, Policy & Legislation

Option Two

Vulnerability & Risk Assessment
Disaster Assessment
Disaster Mitigation

Option Three

Drought & Famine
Rehabilitation & Reconstruction
Displaced Persons in Civil Conflict

Option Four

Disaster Economics
Logistics

Disasters & the Environment

Option Five

International Law of Disasters & Armed Conflict
Emergency Information Management &
Telecommunications
Disaster Management Ethics

Important Information

Please note that Option 1 is compulsory for all first time students, and no certificate will be awarded until the successful completion of this option!

Qualification required:

Std.10/Matric/Grade 12, or N3, or Std.8 with appropriate experience

Course duration:

18 continuous months from date of receiving study material. After the completion of Option 1 and any other two (2) Options a student will qualify for a Technikon Diploma in Disaster Management.

Rochester Institute of Technology

Country: United States of America
Department / School: College of Applied Science and Technology
Course: Disaster and Emergency Management Certificate

Curriculum Description

Rochester Institute of Technology's College of Applied Science and Technology offers an regionally accredited undergraduate Disaster and Emergency Management Certificate program through "distance learning" available anywhere in the country. The program is designed for practicing and aspiring Emergency Professionals in government and industry responsible for planning and preparing for major emergencies. All courses carry full college credit and can be applied to RIT's "distance learning" Associated Applied Science and or Bachelor of Science degree program in Applied Arts and Science. RIT's academic advisors will evaluate courses taken elsewhere and experience for transfer credit. Some

previous college course work and/or experience in emergency management or related field are expected.

To take the courses, you'll need a VCR (NTSC format), personal computer connected to the Internet and running programs such as Netscape or Internet Explorer, and a touch-tone telephone. Your computer must have the following minimum configuration: 32 MB of RAM or more; 20 MB of available hard disk space; 28.8 kbps modem or better; Windows 95/98/NT, or PowerMac with system 7.5.3 or higher.

Courses Offered in Curriculum

Earth Science for Emergency Managers
Emergency Planning & Methodology
Emergency Operations
Manmade Hazards
Emergency Management Law & Regulations
Counter-Terrorism for the First Responder

Upper Iowa University

Country: United States of America
Department / School: Extended University
Course: Certificate in Emergency and Disaster Management

Curriculum Description

Upper Iowa University is offering a Certificate in Emergency and Disaster Management. In our post 9/11 world, our nation's need for preparedness requires trained and dedicated professionals. A certificate in emergency and disaster management prepares you to take the lead in the critical work of responding to a wide range of natural and man-made disasters and civil emergencies. This certificate enhances the ability of first responders, as well as local and state planning agencies, to handle crises. The collegial environment and individual attention we provide creates the conditions for you to unlock your potential.

The Emergency and Disaster Management Certificate consists of 15 semester credits.

Courses Offered in Curriculum

PA 306 Principles of Emergency Management 3 credits
PA 320 Political and Policy Basis of Emergency Management 3 credits
PA 332 Emergency Preparedness & Planning 3 credits
PA 346 Disaster Response and Recovery 3 credits
Choose one of the following:
PA 404 Integrated Emergency Management 3 credits
PSY/SOC 409 Psychology of Disaster 3 credits
PA 414 Principles and Practice of Hazards Mitigation 3 credits
BA 449 Business and Industrial Crisis Management 3 credits

Total: 15 Credits

Credits earned for the Certificate in Emergency and Disaster Management may be applied toward the Bachelor of Science in Emergency and Disaster Management at Upper Iowa University.

Appendix 4. Detailed programs for disaster education for community people

No	1
Country	East Timor
Program Name	Disaster Management Capacity Development
Hazard Type	Multi Hazard - Country Specific (<i>Flash flood, Landslides, flooding, tropical cyclones, tropical storms, drought, earthquake, tsunami</i>) - "wide range of hazards"
Target Group	government officials and communities
Major activities for non formal disaster education	training government officials; supporting community education and awareness campaigns; provide scientific advice
Objectives of the Training/Program (Relevant)	
Methods of Education (General)	training; supporting awareness and community education
Duration	Since may 2002
Funding Agency	UNDP - \$300,000 from Trac 1.1.3 funds
Evaluation System	Not Done / Don't know
Conducted by	ADPC
Partners	ADPC, National Disaster Management Office, Government of the Democratic Republic of East Timor
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	Project based
Others/Characteristics/Remarks	Projects under this programme : "Disaster Management Capacity Development in East Timor" (UNDP program brochure, fact sheet)
Website	www.undp.org/bcpr/disred/documents/publications/corporatereport/asia/easttimor.pdf

No	2
Country	Thailand
Program Name	14th & 15th Regional Training Course on Community Based Disaster Risk Management
Hazard Type	Multi Hazard
Target Group	operation level people; many sectors including, local government departments, NGOs, INGOs, UN, IFRC, emergency response agencies and private sector from asia and the pacific region
Major activities for non formal disaster education	class room training, exercises, simulations, videos, discussion forums and interactive lectures
Objectives of the Training/Program (Relevant)	Design and conduct community based disaster risk assessment; Identify measures for hazard & vulnerability reduction & community capacity building;
Methods of Education (General)	training that includes exercises, simulations, videos, discussion forums and interactive lectures
Duration	Jan 22 - Feb 2, 2007 (regular program)
Funding Agency	participants need to pay
Evaluation System	Not Done / Don't know
Conducted by	ADPC
Partners	
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	Regular
Others/Characteristics/Remarks	It is understood that altogether 15 regional training course on CBDRM took place till February 2007 (from web brochure)
Website	http://www.adpc.net/MainInfoResource/OED-Training/brochureCBDRM-15.pdf

No	3
Country	Indonesia
Program Name	Supporting community education and mainstream teachers in post-tsunami recovery phase in Indonesia
Hazard Type	Tsunami
Target Group	communities
Major activities for non formal disaster education	training for local volunteers and then to others in the community
Objectives of the Training/Program (Relevant)	give community education people for re-construction of the community
Methods of Education (General)	training
Duration	01/09/2005 - 30/01/2006 (after 2004 Tsunami)
Funding Agency	UNESCO - \$500,000
Evaluation System	Not Done / Don't know
Conducted by	UNESCO Jakarta Office
Partners	ILO, UNFPA, UNV, WFP, Save the Children, International Baccalaureate Organization, Braillo, Plan International, Islamic Relief, National Network of Community Learning Centers
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	Project based
Others/Characteristics/Remarks	Proposed. May not have been conducted. (from project proposal)
Website	www.humanitarianinfo.org/sumatra/reference/reports/docs/UN/unesco/UNESCO-VTCCommunityEducationProject.pdf

No	4
Country	Afganistan
Program Name	Community-based Disaster Awareness and Mitigation Project (C-DAMP)
Hazard Type	Multi Hazard - Country Specific (flood, landslides, drought, earthquake, avalanche)
Target Group	communities but also trained UN, NGO and government representatives
Major activities for non formal disaster education	(i) developing appropriate community-level manuals and guidelines on flood, drought and earthquake, (ii) conducting awareness building exercises, (iii) training local technicians as trainers to train local builders, and (iv) providing advisory assistance to communities to incorporate disaster preparedness measures in their Community Action Plan.
Objectives of the Training/Program (Relevant)	introduce a culture of prevention and preparedness and community level through the identification and implementation of community-based disaster mitigation measures, and public education and awareness activities
Methods of Education (General)	
Duration	Since 2004
Funding Agency	UN-HABITAT - \$1,588,900
Evaluation System	Not Done / Don't know
Conducted by	UN-HABITAT
Partners	
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	Project based
Others/Characteristics/Remarks	The project has produced and disseminated 60,000 awareness-raising posters and brochures on flood, drought and earthquake in 34 provinces in collaboration with government departments and NSP (National Solidarity Programme). Facilitating Partners - Trained 300 core trainers from the nine provinces where UN-HABITAT is implementing the NSP. These core-trainers in turn conducted series of workshop on Flood Awareness and Community Action Plan (CAP) for 4,000 Community Development Council and community members. trained 1024 key disaster managers of UN, Government and NGO representatives. The project is completed (adpted from project profile of UNHABITAT)
Website	www.undp.org.ir/reports/DRMworkshop.pdf

No	5
Country	Turkey
Program Name	---
Hazard Type	Earthquake
Target Group	communities, Turkey red cross society (TRCS)
Major activities for non formal disaster education	community education programs
Objectives of the Training/Program (Relevant)	help communities prepare for earthquake
Methods of Education (General)	trainings
Duration	2000 - 2003* (after an earthquake of 1999)
Funding Agency	American Red Cross
Evaluation System	Not Done / Don't know
Conducted by	American Red Cross, Turkish Red Crescent Society
Partners	Bogazici University, TRCS, ARC
Disaster education as Independent or part of larger program	part of a larger program
Regular or project based activities	Project based (TRCS may continue)
Others/Characteristics/Remarks	Name of the program not known, adapted from American Red Cross News letter.
Website	http://www.redcross.org/article/0.1072.0_440_1307.00.html

No	6
Country	Turkey
Program Name	Community Disaster Volunteers
Hazard Type	Earthquake
Target Group	Emergency, Headman, Municipality and, Primary Sector Workers, Police Department, Health Services Workers, Civil Defence Workers and Volunteers, NGO members, Firemen, Turkish RedCrescent Workers and Volunteers, University students and Faculty Members
Major activities for non formal disaster education	training on overview of basic disaster awareness and preparedness,light search and rescue, first aid, triage etc.
Objectives of the Training/Program (Relevant)	Educate and prepare communities for Earthquake
Methods of Education (General)	trainings,publications
Duration	----
Funding Agency	
Evaluation System	Not Done / Don't know
Conducted by	
Partners	
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	Regular, however long term continuation depends upon the fund availabilitiy
Others/Characteristics/Remarks	
Website	http://www.ahep.org/ev/indexe.htm

No	7
Country	Turkey
Program Name	Disaster Preparedness Education Program
Hazard Type	Earthquake
Target Group	communities
Major activities for non formal disaster education	1) Development of Public Education Materials and Training Curricula, 2) Training of Trainers in Basic Disaster Awareness and Community Emergence Response, 3)Disaster Awareness Education and Citizen First Responder Training to the public.
Objectives of the Training/Program (Relevant)	Development of Public Education Materials and Training Curricula, Training of Trainers in Basic Disaster Awareness and Community Emergence Response, Disaster Awareness Education and Citizen First Responder Training to the public, Outreach and coordination of Effort
Methods of Education (General)	trainings,publications,curricula
Duration	----
Funding Agency	USAID / OFDA
Evaluation System	Not Done / Don't know
Conducted by	Ministries, Armed forces, Municipalities, NGOs, TRCS
Partners	Afete Hazirlik Egitim Programi, Bogazici University, Kandilli Observatory and Earthquake Research Institute
Disaster education as Independent or part of larger program	Independet
Regular or project based activities	Regular, however long term continuation depends upon the fund availabilitiy
Others/Characteristics/Remarks	Not sure when the program began
Website	http://www.ahep.org/ev/ahep1_1e.htm

No	8
Country	Cambodia
Program Name	Cambodian Community Based Flood Mitigation and Preparedness Project
Hazard Type	Flood
Target Group	communities, redcross volunteers
Major activities for non formal disaster education	1) empowering communities to develop solutions to flooding;2) training local village volunteers in Disaster Preparedness concepts and techniques;
Objectives of the Training/Program (Relevant)	to establish sustainable, replicable non-government mechanisms for disaster mitigation and preparedness with a focus on flooding
Methods of Education (General)	trainings;demonstration projects that involves measures to mitigate floods and preparedness
Duration	01/09/1998 - January 31, 2001
Funding Agency	World Bank
Evaluation System	Done 2 assessments conducted by Pact over 11 months to determine lessons learnt from the program
Conducted by	Cambodian Red Cross, Pact, International Federation of Red Cross and Red Cross Societies
Partners	
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	Project based
Others/Characteristics/Remarks	program launched under Asian Disaster Mitigation Program. Program implemented in three highly flood prone provinces of Kompong Cham, Prey Veng, and Kandal. (World Bank Case Studies)
Website	www.proventionconsortium.org/themes/default/pdfs/CRA/Cambodia.doc

No	9
Country	Bangladesh
Program Name	Food Security and Disaster Management
Hazard Type	Flood
Target Group	communities, government officials
Major activities for non formal disaster education	1) support the development of local vulnerability maps and community preparedness plans;2) reinforce local early warning and response system 3) training of government disaster management committees 4) seismic hazard awareness.
Objectives of the Training/Program (Relevant)	to improve maternal health and nutrition; improve community-level emergency preparedness and disaster mitigation; construct environmentally-sound community infrastructure; broaden access to clean water and sanitation; enhance the assets and livelihoods of the poor during periods of stress; diversity and increase agricultural production; and improve food security policy
Methods of Education (General)	training; vulnerability mapping, planning, awareness
Duration	2000 - 2007
Funding Agency	USAID - \$600,000 DA, 250,000 ESF (per year)
Evaluation System	Done Reports every year
Conducted by	----
Partners	WVB, CARE, SCF, Virginia-Tech, U.S. Geological Survey, and Bangladesh University of Engineering and Technology (BUET)
Disaster education as Independent or part of larger program	part of a larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	Program launched in 2000. Planned until 2007. Part of a bigger plan to help community in flood prone areas. On going project (from USAID data sheet)
Website	www.usaid.gov/policy/budget/cbi2006/ane/pdf/bd388-008.pdf

No	10
Country	Myanmar
Program Name	Disaster Management
Hazard Type	Multi hazard
Target Group	Myanmar red cross society (MRCS), communities, government officials
Major activities for non formal disaster education	workshops, capacity building activities of MRCS, participatory learning and action, publications of training materials
Objectives of the Training/Program (Relevant)	Capacity Building toward "Well-Prepared National Society, Strengthening National Disaster Response Mechanism, Participatory Learning and Action for Resilient Communities
Methods of Education (General)	workshops, publications
Duration	----
Funding Agency	Myanmar Red Cross Society
Evaluation System	Done Progress Reports (http://www.reliefweb.int/rw/RWB.NSF/db900SID/EVOD-6X9JJK?OpenDocument)
Conducted by	Myanmar Red Cross Society
Partners	----
Disaster education as Independent or part of larger program	part of a larger program
Regular or project based activities	
Others/Characteristics/Remarks	Don't know the program name or the starting/finish date of the program
Website	http://www.reliefweb.int/library/documents/2002/ifrc/mya-19dec.pdf

No	11
Country	World
Program Name	Disaster Risk Reduction begins at School
Hazard Type	Multi hazard
Target Group	school students
Major activities for non formal disaster education	1)introduction of disaster reduction education in school curricula 2) safe construction awareness
Objectives of the Training/Program (Relevant)	to promote disaster reduction education in school curricula, and to improve school safety by encouraging the application of construction standards that can withstand any kind of natural hazard
Methods of Education (General)	curricula;awareness;publications
Duration	15 June 2006 - unknown
Funding Agency	UN/ISDR
Evaluation System	Not Done / Don't know
Conducted by	----
Partners	----
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	project based
Others/Characteristics/Remarks	Don't know how the program is being conducted
Website	http://www.unisdr.org/eng/media-room/press-release/2006/PR-2006-06-Global-disaster-reduction-education-campaign.pdf

No	12
Country	India and Pakistan
Program Name	Drought Preparedness in India and Pakistan
Hazard Type	Drought
Target Group	communities
Major activities for non formal disaster education	
Objectives of the Training/Program (Relevant)	help ensure that communities in Rajasthan, India, and Sindh, Pakistan, are drought resilient
Methods of Education (General)	
Duration	June 2006 - September 2008
Funding Agency	USAID/OFDA - \$798,795
Evaluation System	Not Done / Don't know
Conducted by	Catholic Relief Services
Partners	
Disaster education as Independent or part of larger program	part of program
Regular or project based activities	
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2006/asia_dp_fs01_09-30-2006.pdf

No	13
Country	Asia (Chittagong, Bangladesh; Hyderabad, Pakistan; Dagupan City, the Philippines; Kalutara, Sri Lanka; and Da Nang, Vietnam)
Program Name	Program for Hydro-Meteorological Risk Mitigation in Asian Cities (PROMISE)
Hazard Type	hydro-metrological disaster
Target Group	----
Major activities for non formal disaster education	1)preparedness andmitigation action planning workshops; 2)hazard mapping and vulnerabilityassessments;3) training and capacitybuilding for risk-based urban land use planning; 4) public awareness and advocacy campaigns
Objectives of the Training/Program (Relevant)	builds upon the activitees of AUDMP through demonstration projects in five urban and vunerable cities in South and South East Asia
Methods of Education (General)	training;public awareness;advocacy campaigns
Duration	September 2005 - unknown
Funding Agency	USAID/OFDA - \$1,000,000 (since 2005)
Evaluation System	Not Done / Don't know
Conducted by	ADPC
Partners	
Disaster education as Independent or part of larger program	part of program
Regular or project based activities	Project based
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2006/asia_dp_fs01_09-30-2006.pdf

No	14
Country	Asia
Program Name	Asia Flood Network (AFN)
Hazard Type	Flood
Target Group	communities, regional and national hydro-meterological institutions
Major activities for non formal disaster education	
Objectives of the Training/Program (Relevant)	reduce vunerability to hydro-meterological hazards
Methods of Education (General)	training;dissemination;workshops;presentations etc
Duration	2005 - August 2008
Funding Agency	USAID/OFDA - \$2,500,000 (estimated total cost)
Evaluation System	Not Done / Don't know
Conducted by	National Oceanic and Atmospheric Administration (NOAA)
Partners	U.S. Geological Survey (USGS), ICIMOD
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2006/asia_dp_fs01_09-30-2006.pdf

No	15
Country	South Asia
Program Name	Regional Flood Forecasting
Hazard Type	Flood
Target Group	communities, regional and national institutions
Major activities for non formal disaster education	training;demonstration
Objectives of the Training/Program (Relevant)	reduce vunerability to flash floods in Himalayan region through greater participation of flood-prone communities in flood risk management
Methods of Education (General)	training;demonstration
Duration	November 2001 - ongoing
Funding Agency	USAID/OFDA - FY 2006 - \$165,710
Evaluation System	Not Done / Don't know
Conducted by	ICIMOD
Partners	Key governmental agencies, non-governmental organizations, and academic institutions
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	Project based
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2006/asia_dp_fs01_09-30-2006.pdf

No	16
Country	Bangladesh
Program Name	Community Flood Monitoring and Forecasting in Bangladesh
Hazard Type	Flood
Target Group	communities
Major activities for non formal disaster education	
Objectives of the Training/Program (Relevant)	supports community based approach for flood monitoring and forecasting to reduce the vulnerability of communities living in flood plains and mitigate future flood damage in Bangladesh
Methods of Education (General)	
Duration	September 2001 - September 2007
Funding Agency	USAID/OFDA - \$576,977 (since 2002)
Evaluation System	Not Done / Don't know
Conducted by	Riverside Technology Inc.
Partners	
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2006/asia_dp_fs01_09-30-2006.pdf

No	17
Country	Cambodia
Program Name	Flood Early Warning Systems in the Mekong River Basin
Hazard Type	Flood
Target Group	communities
Major activities for non formal disaster education	demonstration;publications
Objectives of the Training/Program (Relevant)	help strengthen warnings to communities most at risk to floods, help develop useful and understandable flood information for communities, help effectively prepare and respond to flood information
Methods of Education (General)	demonstration;publications
Duration	Jan 2003 - December 2007
Funding Agency	USAID/OFDA - \$1,229,855 (since Jan 2003)
Evaluation System	Not Done / Don't know
Conducted by	MRC (inter-governmental river basin organization)
Partners	
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2006/asia_dp_fs01_09-30-2006.pdf

No	18
Country	Cambodia and East Timor
Program Name	Drought Preparedness
Hazard Type	Drought
Target Group	communities
Major activities for non formal disaster education	
Objectives of the Training/Program (Relevant)	promote target communities capacity to undertake community-based preparedness planning, developing expertise in effective low cost and innovative drought mitigation and preparedness technologies
Methods of Education (General)	
Duration	2006 - unknown
Funding Agency	USAID/OFDA - \$1,200,000 (estimated total cost)
Evaluation System	Not Done / Don't know
Conducted by	CARE
Partners	
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2006/asia_dp_fs01_09-30-2006.pdf

No	19
Country	Sri Lanka
Program Name	U.S./Japan Community-based Preparedness
Hazard Type	Multi hazard
Target Group	schools, communities
Major activities for non formal disaster education	school awareness and capacity building
Objectives of the Training/Program (Relevant)	help raise school awareness of natural disasters and develop strategies and capacity building for risk reduction
Methods of Education (General)	school awareness and capacity building
Duration	FY 2006
Funding Agency	USAID/OFDA - \$74,908
Evaluation System	Not Done / Don't know
Conducted by	Asian Disaster Reduction Center (ADRC)
Partners	Sri Lanka National Disaster Management Center, Sri Lanka Department of Education
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	
Others/Characteristics/Remarks	school-based disaster preparedness program in Galle District, Sri Lanka
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2006/asia_dp_fs01_09-30-2006.pdf

No	20
Country	Laos
Program Name	Champasack Community Based Disaster Management (CBDM)
Hazard Type	Flood
Target Group	communities (school children, villagers)
Major activities for non formal disaster education	1)training for skill development in early warning, preparedness and risk reduction 2) raise awareness 3) group formation for preparedness
Objectives of the Training/Program (Relevant)	introduce a new approach to assist people to learn to live with disaster risk and mitigate the effects of flooding while at the same time maximizing flood benefits
Methods of Education (General)	training;raising awareness;group formation
Duration	April 2001 - March 2004
Funding Agency	AusAID - \$420,000
Evaluation System	Not Done / Don't know Report
Conducted by	World Vision Laos
Partners	National Disaster Management Office, Ministry of Labour and Social Welfare
Disaster education as Independent or part of larger program	part of a larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/publications/TDRM2005/TDRM_Good_Practices/PDF/Chapter_3_3.3.5.pdf

No	21
Country	Indonesia
Program Name	An Eco-Geological Approach towards Community Based Prevention of Rain Induced Landslides in Java
Hazard Type	Landslides
Target Group	communities
Major activities for non formal disaster education	trainings;plantations;public awareness through drawing, drama, folksongs etc
Objectives of the Training/Program (Relevant)	to prevent or minimize the occurrence of landslides by developing an appropriate management system and to reduce serious socio-economic damage
Methods of Education (General)	trainings;plantations;public awareness through drawing, drama, folksongs etc
Duration	unknown
Funding Agency	unknown
Evaluation System	Not Done / Don't know
Conducted by	unknown
Partners	Department of Geological Engineering, Gadjah Mada University, Indonesia
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	
Others/Characteristics/Remarks	Program's details mostly unknown
Website	http://www.adrc.or.jp/publications/TDRM2005/TDRM_Good_Practices/PDF/Chapter_3_3.3.4.pdf

No	22
Country	Vietnam
Program Name	Effectiveness of Disaster Preparedness Program in Vietnam: Planting Mangroves to Mitigate Sea Dyke Erosion
Hazard Type	Multi hazard (Typhoon, flood)
Target Group	communities, RC staff, local authority officials at the grassroots level and teachers and children in schools
Major activities for non formal disaster education	1. Disaster preparedness training for RC staff, local authority officials at the grassroots level and teachers and children in schools.2. Capacity-building activities in term of planning and management skills for RC staff. 3. Awareness raising about mangroves and disaster preparedness through events such as planting ceremonies, technical training courses, talks about mangroves painting competitions, drama theatres, workshops, etc, and the mass media such as newspaper, television, leaflets, and speaker systems. 4. Advocacy, including workshops and studies of mangroves by the Mangrove Research Center
Objectives of the Training/Program (Relevant)	to protect sea dykes and people's lives and property; to build the capacity of the Vietnam Red Cross for disaster preparedness; to improve the coastal environment; and to create jobz and income for vulnerable people
Methods of Education (General)	training;awareness activities workshops, painting competetions, awareness through mass media
Duration	1994 - 2004
Funding Agency	Danish Red Cross
Evaluation System	Not Done / Don't know report
Conducted by	Vietnam Red Cross
Partners	
Disaster education as Independent or part of larger program	part of the larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/publications/TDRM2005/TDRM_Good_Practices/PDF/Chapter_3_3.1.1-1.pdf

No	23
Country	Bangladesh
Program Name	Cyclone Preparedness Programme in Bangladesh
Hazard Type	Cyclone
Target Group	communities
Major activities for non formal disaster education	training, simulations
Objectives of the Training/Program (Relevant)	to minimize loss of lives and properties in cyclone disaster by strengthening the disaster management capacity of the coastal people of Bangladesh
Methods of Education (General)	training;simulations;drills
Duration	June 1973 - unknown (<i>after the Cyclone of 1970</i>)
Funding Agency	Government of Bangladesh and International Federation of Red Cross and Red Crescent Societies - FY 2001 - \$ 460,000 (gov. 56% , IFRC 44%)
Evaluation System	Not Done / Don't know report
Conducted by	Bangladesh Red Crescent Society
Partners	Government of Bangladesh
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	unknown
Others/Characteristics/Remarks	program launched after Nov 12, 1970 major cyclone
Website	http://www.adrc.or.jp/publications/TDRM2005/TDRM_Good_Practices/PDF/Chapter_3_3.1.2-1.pdf

No	24
Country	Iran
Program Name	Demonstrations and Training to Raise Community Awareness and Build Capacity for safer housing in Bam
Hazard Type	Earthquake
Target Group	local masons, communities
Major activities for non formal disaster education	shake table demonstrations, workshops, on the job training
Objectives of the Training/Program (Relevant)	to impress upon people the consequences of living in seismically unsafe houses; to enhance their understanding of the performance of simple structures with and without earthquake-resistant features under the impact of an earthquake; to build peoples' confidence in earthquake-resistant building technologies, including the retrofitting of existing houses
Methods of Education (General)	demonstrations & trainings
Duration	August 2004 - November 2004 (<i>after Bam earthquake, 2003</i>)
Funding Agency	United Nations Centre for Regional Development Disaster Management Planning Hyogo Office
Evaluation System	Done report
Conducted by	National Society for Earthquake Technology - Nepal
Partners	Citizens towards Overseas Disaster Emergency (CODE)
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/publications/TDRM2005/TDRM_Good_Practices/PDF/Chapter_3_3.1.4-2.pdf

No	25
Country	Japan
Program Name	Disasters and Education: Maiko High School in Japan
Hazard Type	Earthquake
Target Group	school students
Major activities for non formal disaster education	disaster education in schools, training in evacuation and extinguishing fires, field visits
Objectives of the Training/Program (Relevant)	teach high school students about disaster mitigation education
Methods of Education (General)	curricula; trainings
Duration	April 2002 - ongoing (<i>after kobe earthquake 1995</i>)
Funding Agency	----
Evaluation System	Not Done / Don't know
Conducted by	Maiko High School
Partners	National Society for Earthquake Technology - Nepal
Disaster education as Independent or part of larger program	independent program
Regular or project based activities	unknown
Others/Characteristics/Remarks	Don't know if a curriculum is developed or not
Website	http://www.adrc.or.jp/publications/TDRM2005/TDRM_Good_Practices/PDF/Chapter_3_3.2.4-1.pdf

No	26
Country	Thailand
Program Name	Community Based Disaster Management
Hazard Type	Multi hazards
Target Group	communities
Major activities for non formal disaster education	training to the villagers
Objectives of the Training/Program (Relevant)	creation of awareness among villagers and mobilization of their participation in Thailand
Methods of Education (General)	trainings;
Duration	Feb 16 - 17, 2004
Funding Agency	unknown - \$500
Evaluation System	Not Done / Don't know
Conducted by	Department of Disaster Prevention and Mitigation, Ministry of Interior, Thailand
Partners	
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	project based
Others/Characteristics/Remarks	Unknown who conducted the program
Website	http://www.adrc.or.jp/publications/TDRM2005/TDRM_Good_Practices/PDF/Chapter_3_3.3.9.pdf

No	27
Country	Philippines
Program Name	Disaster Management and Preparedness Seminar
Hazard Type	Multi hazard (Typhoon, flood)
Target Group	communities
Major activities for non formal disaster education	
Objectives of the Training/Program (Relevant)	prepare communities in case of any disaster and teach them how to cope with disaster
Methods of Education (General)	
Duration	Jun-97
Funding Agency	unknown
Evaluation System	Done Evaluation done by core donors
Conducted by	Boklod Tao (People Bonded Together)
Partners	
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	
Others/Characteristics/Remarks	The name of the program not confirmed
Website	****

No	28
Country	Philippines
Program Name	Integrated Community Disaster Planning Program (ICDPP)
Hazard Type	Multi hazard
Target Group	communities
Major activities for non formal disaster education	
Objectives of the Training/Program (Relevant)	help communities develop emergency plans in case of disaster
Methods of Education (General)	
Duration	1994 - unknown
Funding Agency	unknown
Evaluation System	Not Done / Don't know
Conducted by	Philippines National Red Cross (PNRC)
Partners	
Disaster education as Independent or part of larger program	
Regular or project based activities	
Others/Characteristics/Remarks	
Website	****

No	29
Country	Philippines
Program Name	Recovering from Disaster: A Post-Disaster Rehabilitation and Mitigation Program in Saint Bernard, Southern Leyte
Hazard Type	landslides
Target Group	Communities of four landslide affected barangays in Saint Bernard, Southern Leyte
Major activities for non formal disaster education	training to the local residents
Objectives of the Training/Program (Relevant)	(1) Economic Livelihood Assistance in the form of seed and farm tools dispersal; and, (2) Capacity Building that will strengthen the people's capability in preparing for and mitigating the adverse effects of disasters.
Methods of Education (General)	skill development;empowerment
Duration	May 1, 2006 - April 30, 2007 (one year)
Funding Agency	Canada Fund
Evaluation System	
Conducted by	Citizens' Disaster Response Center
Partners	
Disaster education as Independent or part of larger program	part of the larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	on going project
Website	http://www.pcco.org.ph/pcco3/downloadables/cfprojectbriefs/FY06-07/02-06-07%20CDRC.pdf

No	30
Country	Central Asian Regions (<i>Kazakhstan; Tajikistan; and, Uzbekistan</i>)
Program Name	(CarESI- Central Asia Region Earthquake Safety Initiative)
Hazard Type	Earthquakes
Target Group	Residents, non-governmental organizations, public agencies and businesses of Almaty, Dushanbe and Tashkent
Major activities for non formal disaster education	<i>as mentioned in the objectives</i>
Objectives of the Training/Program (Relevant)	1)Raise the awareness of residents, non-governmental organizations, public agencies and businesses about their high risk from earthquakes and their options to mitigate that risk. 2)Train residents, non-governmental organizations, public agencies and business of these cities in risk mitigation. 3)Reach out to support and promote disaster mitigation activities throughout the region.
Methods of Education (General)	raise awareness, training
Duration	2002-2005
Funding Agency	USAID
Evaluation System	Not Done / Don't know
Conducted by	GeoHazards International
Partners	USAID
Disaster education as Independent or part of larger program	Independent
Regular or project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.geohaz.org/contents/projects/casia_archived.html

No	31
Country	South Asia (<i>Bangladesh, Cambodia, India, Indonesia, Laos, Nepal, the Philippines, Sri Lanka, and Thailand</i>)
Program Name	Asian Urban Disaster Mitigation Program (AUDMP)
Hazard Type	Multi hazard
Target Group	Communities, NGOs, non-governmental organizations (NGOs), disaster management organizations, and regional and national governments.
Major activities for non formal disaster education	
Objectives of the Training/Program (Relevant)	to make cities safer by reducing the disaster vulnerability of urban populations, infrastructure, critical facilities, and shelter, and by promoting replication and adaptation of successful preparedness
Methods of Education (General)	replication and adaptation of successful preparedness; disaster-related information, networking; development and management of courses
Duration	September 1995 - August 2004
Funding Agency	USAID/OFDA - \$9,453,800
Evaluation System	Not Done / Don't know
Conducted by	ADPC
Partners	
Disaster education as Independent or part of larger program	part of larger program
Regular or project based activities	
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2004/ASIA_DPP_FS01_11-26-2003.pdf

No	32
Country	South Asia (<i>India, Indonesia, Nepal, Bangladesh and the Philippines</i>)
Program Name	Program for the Enhancement of Emergency Response (PEER), Phase II
Hazard Type	Multi hazard
Target Group	Emergency response organisations and other organisations
Major activities for non formal disaster education	training of first responders, collapsed structure search and rescue, and the development of hospital preparedness for mass casualty events.
Objectives of the Training/Program (Relevant)	to create a large pool of trained instructors from emergency response agencies who will in turn train others from their organization
Methods of Education (General)	training
Duration	March 2003 - 2008
Funding Agency	USAID/OFDA - \$3,748,117 to date
Evaluation System	Not Done / Don't know
Conducted by	NSET Nepal
Partners	International Resources Group, John Hopkins University, and Safety Solutions Inc.
Disaster education as Independent or part of larger program	independent program
Regular or project based activities	
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2004/ASIA_DPP_FS01_11-26-2003.pdf

No	33
Country	South Pacific Countries (<i>The Cook Islands, Fiji, Kiribati, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu, Palau</i>)
Program Name	South Pacific Disaster Training Program
Hazard Type	Multi hazard
Target Group	local and national disaster management agencies and individuals of the south pacific regions
Major activities for non formal disaster education	trainings; training materials development and adoption
Objectives of the Training/Program (Relevant)	1)improve the capacity and performance of local and national disaster management agencies and individuals; 2)develop and adapt training materials relevant to the region; and 3) strengthen the capacity of South Pacific countries to organize and conduct disaster management courses.
Methods of Education (General)	capacity development;strengthen dm courses
Duration	Since 1995
Funding Agency	USAID/OFDA - \$2,260,141 to date
Evaluation System	Not Done / Don't know
Conducted by	The Asia Foundation
Partners	
Disaster education as Independent or part of larger program	independent program
Regular or project based activities	Project based
Others/Characteristics/Remarks	
Website	1) http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2004/ASIA_DPP_FS01_11-26-2003.pdf

No	34
Country	Phillipines and Papua New Gunea
Program Name	Strengthening of Local Earthquake Monitoring Efforts:
Hazard Type	Earthquake
Target Group	Earthquake monitoring organizations (<i>Philippines Institute of Volcanology and Seismology, Port Moresby Geophysical Observatory and Rabaul Volcano Observatory, Papua New Guinea</i>)
Major activities for non formal disaster education	1) training on how to conduct risk assessments, 2) development of early warning plans 3)training on technology transfers.
Objectives of the Training/Program (Relevant)	to provide technical assistance to earthquake monitoring organizations
Methods of Education (General)	training;institutional support;technology transfer
Duration	
Funding Agency	USAID/OFDA, NOAA
Evaluation System	Not Done / Don't know
Conducted by	USGS's Volcano Disaster Assistance Program (VDAP)
Partners	
Disaster education as Independent or part of larger program	part of program
Regular or project based activities	
Others/Characteristics/Remarks	It is a work wide program
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2004/ASIA_DPP_FS01_11-26-2003.pdf

No	35
Country	India
Program Name	India Earthquake Safety Initiative
Hazard Type	Earthquake
Target Group	
Major activities for non formal disaster education	
Objectives of the Training/Program (Relevant)	the objectives of the program are to conduct risk assessments and risk reduction activities in 20 of India's most earthquake-prone urban areas, and implement mitigation activities in five of those areas.
Methods of Education (General)	risk reduction activities
Duration	September 2002 - October 2005.
Funding Agency	co funded - USAID/OFDA - \$650,000
Evaluation System	Not Done / Don't know
Conducted by	GeoHazards International
Partners	
Disaster education as Independent or part of larger program	part of program
Regular or project based activities	
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2004/ASIA_DPP_FS01_11-26-2003.pdf

No	36
Country	India
Program Name	Incident Command System (ICS) Training
Hazard Type	Multi hazard
Target Group	government and nongovernment disaster managers
Major activities for non formal disaster education	1) provides ICS training and simulation exercises at the national and state levels
Objectives of the Training/Program (Relevant)	1) provides ICS training and simulation exercises at the national and state levels in India and the region, 2) technical assistance and training to government and nongovernment disaster managers to assist them in developing coordinated disaster response planning.
Methods of Education (General)	trainings;simulations
Duration	April 2002 and will continue until April 2004.
Funding Agency	USAID/OFDA, USAID India - \$906,712
Evaluation System	Not Done / Don't know
Conducted by	USAID/OFDA and the U.S. Forest Service,
Partners	
Disaster education as Independent or part of larger program	independent program
Regular or project based activities	project based
Others/Characteristics/Remarks	
Website	1) http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2004/ASIA_DPP_FS01_11-26-2003.pdf

No	37
Country	Indonesia and Philippines
Program Name	Climate Forecast Applications:
Hazard Type	Climate Variability
Target Group	Communities
Major activities for non formal disaster education	1) demonstration projects, 2) community mobilizations
Objectives of the Training/Program (Relevant)	1) to strengthen the national capabilities of Indonesia and the Philippines to manage and reduce the impacts of climate fluctuations through targeted demonstration projects and community participation. 2)develop decision support tools and capacities to reduce vulnerability to climate variability at the community level and mobilize communities to utilize the climate forecast data
Methods of Education (General)	1) demonstration projects, 2) community mobilizations
Duration	April 2003 - March 2008.
Funding Agency	USAID/OFDA - \$1,498,863
Evaluation System	Not Done / Don't know
Conducted by	
Partners	
Disaster education as Independent or part of larger program	part of program
Regular or project based activities	project based
Others/Characteristics/Remarks	This project is a follow-up initiative to the 1998-2003 Extreme Climate Events Program.
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2004/ASIA_DPP_FS01_11-26-2003.pdf

No	38
Country	South and Southeast Asia
Program Name	Education for Natural Disaster Preparedness in Asia-Pacific within the context of Education for Sustainable Development
Hazard Type	Multi hazard
Target Group	school childrens, communities, key stake holders, environmental agencies; local administrative authorities
Major activities for non formal disaster education	1) publication "Natural Disaster Preparedness and Education for Sustainable Development" 2) Disaster management game 3) workshops 4) VCD 5) meetings
Objectives of the Training/Program (Relevant)	1. Communication and dissemination of information to inform education and policy formulation for disaster prevention, recognition and preparedness 2. Production of locally relevant educational materials in disaster prevention, recognition and preparedness that integrate important principles of ESD and are adaptable to different sectors and stakeholders.
Methods of Education (General)	develop, publish and disseminate educational materials for disaster prevention, recognition and preparedness; curriculum; awareness
Duration	April – December, 2005 (initially) but some activities continues
Funding Agency	Japanese Funds in Trust - UNESCO Bangkok - USD100,000
Evaluation System	Not Done / Don't know
Conducted by	UNESCO Bangkok Asia and Pacific Regional Bureau for Education
Partners	UNESCO Jakarta and New Delhi offices. Other key UN partners will include UNDP and UNDAC teams.
Disaster education as Independent or part of larger program	independet program
Regular or project based activities	project based
Others/Characteristics/Remarks	Adapted from UNESCO Funding Proposal to Japanese Funds in Trust
Website	1) http://www.un.or.th/pdf/dp_060305_JFIT_Tsunami_ESD.pdf http://www.unescobkk.org/index.php?id=4035

No	39
Country	Thailand
Program Name	End-to-End Early Warning System and Preparedness, For Tsunami and other Natural Hazards in Southern Thailand
Hazard Type	Tsunami
Target Group	Thailand and tsunami affected communities of Southern Thailand
Major activities for non formal disaster education	• Training of national and local government offices in crisis management and disaster damage assessment and needs analysis. • Train a cadre of trainers and to establish community based search and rescue capabilities. • Implement a national public education and awareness campaigns on early warning and preparedness.
Objectives of the Training/Program (Relevant)	• Support to the development of the national end-to-end multi-hazard early warning system. • Enhancement of institutional disaster management capacities and community preparedness systems. • Public education and awareness campaigns on early warning and preparedness activities • Development of national disaster risk management information system reduction.
Methods of Education (General)	training; public awareness education and campaigns;
Duration	July 2005 – July 2006
Funding Agency	UNDP - USD\$ 1,300,000
Evaluation System	Not Done / Don't know
Conducted by	UNDP
Partners	ADPC, MOFA-TICA, MOI-DDPM, IFRC-Thai Red Cross, Thai Navy, Thai Geotechnical and Meteorological Departments, Provincial and Local Authorities and communities
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	project based
Others/Characteristics/Remarks	Funding Proposal after Tsunami Recovery and Rehabilitation
Website	http://www.undp.or.th/tsunami/documents/earlywarning_28june_000.pdf

No	40
Country	Indonesia, Srilanka, Thailand, maldives and India (2004 tsunami affected countries)
Program Name	Tsunami Recovery Program - Disaster Preparedness Program
Hazard Type	Multi hazard (Tsunami focus)
Target Group	Communities of 2004 tsunami-affected countries
Major activities for non formal disaster education	American Red Cross is implementing programs to help raise public awareness of hazards and vulnerabilities and to train communities on how to respond to potential disasters and also includes many other programs
Objectives of the Training/Program (Relevant)	To help communities better prepare for future emergencies by implementing programs to help raise public awareness of hazards and vulnerabilities and to train communities on how to respond to potential disasters
Methods of Education (General)	training;awareness;education;disaster plans
Duration	December 2004 - likely till 2010 (after 2004 tsunami)
Funding Agency	American Red Cross - USD \$26.7 million
Evaluation System	Not Done / Don't know
Conducted by	American Red Cross
Partners	Host National Societies, Participating National Societies, Non-Governmental Organizations (NGOs), International Organizations (IOs) and United Nations (UN) agencies
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	
Others/Characteristics/Remarks	Adapted from American Red Cross - Two Year Status Report. Many programs are ongoing
Website	http://www.redcross.org/images/pdfs/TRP2YrReport.pdf

No	41
Country	India
Program Name	Disaster Risk Management Programme (2002-2007)
Hazard Type	Multi hazard
Target Group	Communities, government officials, schools teachers, school childrens, village leaders etc.
Major activities for non formal disaster education	Activities includes DM committees formation, DM plans, DM trainings, first aid trainings, search and rescue trainings, publications, DM plans, mock drills, awareness activities like slogan writing, posters, drama rally, IDNDR day observed, computer softwares, field visits etc
Objectives of the Training/Program (Relevant)	disaster preparedness and mitigation in Gujarat
Methods of Education (General)	training;demonstration;publications;dm committees; demonstrations, drills etc
Duration	Since 2002 - 2005 (after Gujarat earthquake)
Funding Agency	UNDP and Government of India
Evaluation System	Not Done / Don't know
Conducted by	UNDP - Gujarat, Government of India
Partners	Gujarat State Disaster Management Authority (GSDMA), NGOs, The Indian Red Cross Society, municipal fire department, other relevant government department, businesses agencies
Disaster education as Independent or part of larger program	part of larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	Gujarat's activities under the Government of India - GoI-UNDP
Website	http://www.undpquakerehab.org/undpprogreport05.pdf

No	42
Country	Indonesia
Program Name	Integrated Sediment-Related Disaster Management Project
Hazard Type	sediment- related disasters
Target Group	Engineers, communities
Major activities for non formal disaster education	
Objectives of the Training/Program (Relevant)	Engineers involved in disaster mitigation together with local residents surrounding volcanic areas are able to plan and implement disaster mitigation measures to reduce the impacts of sediment- related disasters in villages within the volcanic areas.
Methods of Education (General)	human resource development;dm system establishment
Duration	5 years (April 2001-March 2006)
Funding Agency	Japan International Cooperation Agency (JICA) - 60 billion rupiah
Evaluation System	Not Done / Don't know
Conducted by	JICA,
Partners	Ministry of Settlements and Regional Infrastructure, Indonesia
Disaster education as Independent or part of larger program	part of the larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	Current status not known
Website	http://www.jica.or.id/sediment.html

No	43
Country	Indonesia
Program Name	Tsunami Recovery Program - Disaster Preparedness
Hazard Type	Multi hazard (Tsunami focus)
Target Group	150 Aceh Communities and Indonesian Red Cross Society, school childrens, teachers
Major activities for non formal disaster education	same as objectives at right hand side objectives
Objectives of the Training/Program (Relevant)	1. establishing community disaster committees. 2. helping create community disaster plans that link to the national disaster response system. 3. providing public education on household-level risk reduction. 4. helping to build the Indonesian Red Cross disaster preparedness capacity. (only relevant objectives shown)
Methods of Education (General)	forantion of dm committees;community disaster plans;public education;small mitigation projects
Duration	After Asian Tsunami 2004
Funding Agency	American Red Cross - Total \$ 15 million (This total budget includes overall Disaster Preparedness - Tsunami Recovery Program of American Red Cross and will be spent on other target countries too)
Evaluation System	Not Done / Don't know
Conducted by	American Red Cross
Partners	involvement of indonesian red cross
Disaster education as Independent or part of larger program	part of the larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	The American Red Cross is beginning similar comprehensive disaster preparedness and management programs throughout the tsunami-affected region.
Website	http://www.redcross.org/sponsors/irf/1yrtsustewrepdisasterprep.asp

No	44
Country	Sri Lanka
Program Name	Tsunami Recovery Program - Disaster Preparedness
Hazard Type	Multi hazard (Tsunami focus)
Target Group	Communities (200,000 people in Kalutara, Colombo, Negambo, Hambantota, Matara and Galle) and Sri Lankan Red Cross, school childrens, teachers
Major activities for non formal disaster education	same as objectives at right hand side objectives
Objectives of the Training/Program (Relevant)	1. establishing community disaster committees and disaster plans that link to the national disaster response system, 2. The program will also provide community- and school-based education on disaster preparedness, 3. encourage families to build disaster and first aid kits and to create a family disaster plan so that family members know evacuation routes and how to reconnect in the event of disaster.
Methods of Education (General)	training;capacity building;dm committees & plans;school based education
Duration	After Asian Tsunami 2004
Funding Agency	American Red Cross - Total \$ 15 million (This total budget includes overall Disaster Preparedness - Tsunami Recovery Program of American Red Cross and will be spent on other target countries too)
Evaluation System	Not Done / Don't know
Conducted by	American Red Cross
Partners	International Committee of the Red Cross (ICRC)
Disaster education as Independent or part of larger program	part of the larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	The American Red Cross is beginning similar comprehensive disaster preparedness and management programs throughout the tsunami-affected region.
Website	http://www.redcross.org/sponsors/irf/1yrtsustewreprepar.asp

No	45
Country	South Asia (<i>India, Indonesia, Nepal, and the Philippines</i>)
Program Name	Program for the Enhancement of Emergency Response (PEER)
Hazard Type	Multi hazard
Target Group	local, regional, and national agencies
Major activities for non formal disaster education	Medical First Response; Collapsed Structure Search and Rescue; and Hospital Preparedness for Emergency training
Objectives of the Training/Program (Relevant)	organizing and conducting courses in Medical First Response; Collapsed Structure Search and Rescue; and Hospital Preparedness for Emergency training
Methods of Education (General)	training
Duration	September 1998 - June 2003
Funding Agency	USAID/OFDA, \$562,030
Evaluation System	Not Done / Don't know
Conducted by	USAID/OFDA and the U.S Forest Service
Partners	Asian Disaster Preparedness Center (ADPC), USAID/OFDA, and Miami-Dade Fire Rescue Department (MDFRD)
Disaster education as Independent or part of larger program	independent program
Regular or project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.state.gov/p/sca/rls/fs/18629.htm

No	46
Country	Indonesia
Program Name	Disaster Risk Reduction
Hazard Type	Multi hazard (<i>volcanoes, earthquakes, fires, floods, tsunami etc</i>)
Target Group	Communities (<i>Nanggroe Aceh Darussalam province, West Sumatra (Nias island)</i>)
Major activities for non formal disaster education	1) integrating disaster risk reduction into the local curriculum, 2) conducting hazard mapping of the communities, and 3) educational campaigns to teach communities what to do during earthquakes.
Objectives of the Training/Program (Relevant)	to reduce the burden of disasters on the poor and most vulnerable and increase the resilience of affected communities through promotion of activities at the community level, with children playing a leading role within their communities, to develop models of good practice that reduce vulnerability and enhance resilience.
Methods of Education (General)	awareness; curriculum; teaching lectures; workshops
Duration	
Funding Agency	
Evaluation System	Not Done / Don't know
Conducted by	Save the children
Partners	Save the children UK US
Disaster education as Independent or part of larger program	part of larger program
Regular or project based activities	not much details
Others/Characteristics/Remarks	
Website	http://www.savethechildren.org/countries/asia/indonesia.htm

No	47
Country	China
Program Name	Emergency Assistance to Earthquake Disaster in Southern Xinjiang Autonomous Region
Hazard Type	earthquakes
Target Group	local government and communities
Major activities for non formal disaster education	1) three-day workshop was held to train about ten local people on disaster information-gathering equipment, 2) Educational materials were translated into the local language, 3) field trips to earthquake affected regions
Objectives of the Training/Program (Relevant)	1) to strengthen the disaster mitigation capacity of southern Xinjiang by setting up information gathering stations at three locations in Southern Xinjiang; 2) to assist the local governments of Kashgar and Hetian launch a public awareness raising programme on earthquake disasters.
Methods of Education (General)	training; awareness; capacity building through networking
Duration	since 1998 - not known (<i>after an earthquake</i>)
Funding Agency	UNDP, US\$20,000 and Foundation for Research and International Education relating to Natural Disasters (FRIEND)
Evaluation System	Done results not known
Conducted by	UNDP & FRIEND funded network
Partners	
Disaster education as Independent or part of larger program	part of the larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	project started after, an earthquake measuring 6.2 on the Richter scale hit Kashgar Prefecture in Southern Xinjiang on 2 August 1998.
Website	http://www.globalwatch.org/ungp/xinjiang98.htm

No	48
Country	India
Program Name	Disaster Management Support
Hazard Type	Multi hazard
Target Group	professionals and communities
Major activities for non formal disaster education	1) training and technology exchanges to professionalize India's Incident Command System (ICS) 2) Train disaster volunteers and management teams in disaster-prone areas to create community-level disaster preparedness plans and to respond immediately after a catastrophe 3) Enhance the techniques of search and rescue teams
Objectives of the Training/Program (Relevant)	reduce vulnerability to natural and human-caused disasters
Methods of Education (General)	training;technology transfer
Duration	September 2003 to September 2007
Funding Agency	USAID - \$22.8 million
Evaluation System	Not Done / Don't know
Conducted by	USAID
Partners	1. National Disaster Management Division, Ministry of Home Affairs, Government of India, 2. The U.S. Forest Service (USFS), 3. United Nations Development Fund (UNDP), 4. The Federal Emergency Management Agency (FEMA), 5. The National Oceanic and Atmospheric Administration (NOAA), 6. The U.S. Geological Survey (USGS), 7. Geo Hazards International (GHI) and 8. United Nations Development Programme
Disaster education as Independent or part of larger program	part of the larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/in/our_work/program_areas/disaster_management.htm

No	49
Country	India
Program Name	Disaster Risk Management
Hazard Type	Multi hazard
Target Group	Communities of Assam, Gujarat, Orissa, Uttaranchal, West Bengal, Maharashtra and Tamil Nadu
Major activities for non formal disaster education	1. Forms disaster management committees that coordinate planning and responses at the national, state and local government levels 2. Instructs thousands of community members in first aid techniques 3. Helps communities develop disaster management plans 4. Trains masons in disaster resistant construction so that buildings can withstand the forces of nature better (only relevant)
Objectives of the Training/Program (Relevant)	the project helps communities develop disaster plans, identify vulnerabilities and overcome them, and put in place crucial disaster response systems that save lives.
Methods of Education (General)	training;dm committees formations;dm plans;websites;rescue, train masons
Duration	August 2003 to September 2006
Funding Agency	USAID and UNDP
Evaluation System	
Conducted by	USAID India
Partners	1. Government of India's and 2. the United Nations Development Programme's (UNDP)
Disaster education as Independent or part of larger program	part of the larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	By the time of its completion, USAID and the UNDP will have provided 45,000 villages with the training and tools they need to help their communities to prepare for and respond to disasters.
Website	http://www.usaid.gov/in/our_work/activities/DM/dms.htm

No	50
Country	South East Asia (<i>Cambodia, Indonesia, Lao PDR, the Philippines and Vietnam</i>)
Program Name	The Partnerships for Disaster Reduction - South East Asia (PDR-SEA) project
Hazard Type	Multi hazard
Target Group	national disaster management organisations officials and communities
Major activities for non formal disaster education	
Objectives of the Training/Program (Relevant)	1. strengthening Networking among National Disaster Management Organizations/ Coordinating Bodies (NDMOs) 2. capacity Building of DIPECHO Partners in Community-based Disaster Management (CBDM)
Methods of Education (General)	training;publications;networking & coordination, information exchange
Duration	February, 2001 - February, 2002
Funding Agency	European Commission Humanitarian Aid Office (ECHO)
Evaluation System	Not Done / Don't know
Conducted by	ADPC
Partners	national disaster management organisations of the project countries
Disaster education as Independent or part of larger program	part of larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.adpc.net/pdr-sea/phase1.htm

No	51
Country	Philippines
Program Name	Community-Based Disaster Management in Priority Environmental Critical Areas in Talomo-Lipadas Watershed
Hazard Type	Multi hazard (<i>Flash floods and landslides</i>)
Target Group	Communities of Davao City
Major activities for non formal disaster education	1. Introduction and adoption of preventive and mitigating measures introduction and adopted 2. Community mobilization to participate in the disaster preparedness or management activities 3. Brgy./Community Disaster Management Plans formulation 4. Community-based multisectoral disaster response group formation
Objectives of the Training/Program (Relevant)	reducing vulnerabilities of the communities through developing and/or enhancing the people's capability to manage these events.
Methods of Education (General)	participation on dm activities;development of plans; networking
Duration	September 07, 2006 - September 30, 2007
Funding Agency	Canada Fund Php 3,292,050.00.
Evaluation System	Done
Conducted by	PCEEM Davao Foundation, Inc.
Partners	
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	project based
Others/Characteristics/Remarks	on going project
Website	http://www.pcco.org.ph/pcco3/downloadables/cfprojectbriefs/FY06-07/09-06-07%20PCEEM%20Foundation.pdf

No	52
Country	Philippines
Program Name	Conservation Agriculture: An Appropriate Mechanism for Disaster Mitigation and Poverty Alleviation
Hazard Type	Multi hazards (<i>floods, deforestation</i>)
Target Group	Farmers of Davao City
Major activities for non formal disaster education	1) community based disaster preparedness program 2) knowledge transfer 3) training
Objectives of the Training/Program (Relevant)	1. to mitigate disasters by rehabilitating the denuded forest lands of the project areas; 2. Community-Based Disaster Preparedness Program which seeks to prepare the beneficiaries for any disaster by transferring knowledge and facilities to the community
Methods of Education (General)	training;orientation
Duration	September 07, 2006 - September 30, 2007
Funding Agency	Canada Fund - Php 2,216,275.60
Evaluation System	Done
	report to donor - ongoing
Conducted by	Mindanao Interfaith Services Foundation, Inc.
Partners	
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	project based
Others/Characteristics/Remarks	on going project
Website	http://www.pcco.org.ph/pcco3/downloadables/cfprojectbriefs/FY06-07/11-06-07%20MISFI.pdf

No	53
Country	Philippines
Program Name	Integrated Grassroots Disaster Preparedness and Mitigation Initiatives Program
Hazard Type	Multi hazard (<i>floods, deforestation</i>)
Target Group	communities - 19,225 residents of Nueva Ecija and Aurora
Major activities for non formal disaster education	· Disaster Preparedness Education and Training Services · Grassroots Disaster Response Machinery (GDRM) Formation and Institutional Building · Public Information and Education
Objectives of the Training/Program (Relevant)	
Methods of Education (General)	training;education;publications;public information campaign
Duration	September 11, 2006 - April 30, 2008
Funding Agency	Canada Fund - Php 2,391,040.00
Evaluation System	Done
	report to donor - ongoing
Conducted by	Alay Bayan, Inc.
Partners	
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	project based
Others/Characteristics/Remarks	on going project
Website	http://www.pcco.org.ph/pcco3/downloadables/cfprojectbriefs/FY06-07/12-06-07%20Alay-Bayan.pdf

No	54
Country	Philippines
Program Name	Measures to Mitigate the Impact of Oil Spill on Fisher Folks of the Coast of Guimaras
Hazard Type	Oil Spill
Target Group	communities - 195 families
Major activities for non formal disaster education	1. training the residents to better respond to present and future oil spill-related situation.
Objectives of the Training/Program (Relevant)	enhancing the coping up mechanism of the affected residents of Barangay Tando in Nueva Valencia municipality so that they are able to effectively manage the immediate and long-term effects of the oil spill in Guimaras province.
Methods of Education (General)	training
Duration	December 05, 2006 - December 15, 2007
Funding Agency	Canada Fund - Php 2,355,877.60
Evaluation System	Done report to donor - ongoing
Conducted by	Center for Relief and Rehabilitation, Education and Economic Development, Inc.
Partners	
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	project based
Others/Characteristics/Remarks	on going project,
Website	http://www.pcco.org.ph/pcco3/downloadables/cfprojectbriefs/FY06-07/15-06-07%20CRREED.pdf

No	55
Country	Philippines
Program Name	Disaster Preparedness and Management. Agricultural Support for Typhoon Victims in Montalban and Antipolo, Rizal
Hazard Type	Typhoon
Target Group	Communities - 250 women, 350 men, 1,800 children
Major activities for non formal disaster education	1. capacity development and skill development through teaching learning exercises
Objectives of the Training/Program (Relevant)	a) helping them rehabilitate their agriculture-based livelihood activities, b) developing their capacity to managed community-based public health program, c) enhancing their capability to manage and respond to disasters should these come in the future, and d) improving their skills in implementing community-based development projects.
Methods of Education (General)	learning, enhance capability
Duration	December 18, 2006 - December 31, 2007
Funding Agency	Canada Fund - Php 1,580,480.00
Evaluation System	Done report to donor - ongoing
Conducted by	Council for Health and Development Eleanor A. Jara, MD
Partners	
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	project based
Others/Characteristics/Remarks	on going project
Website	http://www.pcco.org.ph/pcco3/downloadables/cfprojectbriefs/FY06-07/18-06-07%20CHD.pdf

No	56
Country	Philippines
Program Name	Rehabilitation and Preparedness Program for "Milenyo" Victims in Bicol
Hazard Type	Typhoon
Target Group	Communities - 382 families
Major activities for non formal disaster education	1) disaster preparedness training, 2) disaster management (DM) orientation, 3) Dm plans, and DM committees 4) Drills
Objectives of the Training/Program (Relevant)	conduct of disaster preparedness training including disaster drills
Methods of Education (General)	training; orientation; drills
Duration	December 18, 2006 - December 30, 2007
Funding Agency	Canada Fund - Php 1,230,660.00
Evaluation System	Done
	report to donor - ongoing
Conducted by	Tabang sa mga Biktima sa Bicol, Inc. (TABI)
Partners	
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	project based
Others/Characteristics/Remarks	on going project
Website	http://www.pcco.org.ph/pcco3/downloadables/cfprojectbriefs/FY06-07/19-06-07%20TABI.pdf

No	57
Country	Thailand
Program Name	Fourteenth Regional Training Course on Community Based Disaster Risk Management
Hazard Type	Multi hazard
Target Group	operation level people; (<i>many sectors including, local government departments, NGOs, INGOs, UN, IFRC, emergency response agencies and private sector from asia and the pacific region</i>)
Major activities for non formal disaster education	class room training, exercises, simulations, videos, discussion forums and interactive lectures
Objectives of the Training/Program (Relevant)	1. Design and conduct community based disaster risk assessment; 2. Identify measures for hazard & vulnerability reduction & community capacity building; 3. Prepare a risk reduction plan & understand how to integrate it into development activities; 4. Analyze problems in the implementation of community based risk reduction plans;
Methods of Education (General)	training that includes exercises, simulations, videos, discussion forums and interactive lectures
Duration	17-28 July 2006
Funding Agency	participants need to pay - unknown
Evaluation System	Not Done / Don't know
Conducted by	ADPC
Partners	
Disaster education as Independent or part of larger program	independent
Regular or project based activities	regular program
Others/Characteristics/Remarks	
Website	http://www.adpc.net/training/brochure/CBDRM-14.pdf

No	58
Country	Indonesia
Program Name	National Course on Community Based Disaster Risk Management in Indonesia
Hazard Type	Multi hazard
Target Group	operation level people; (<i>many sectors including, local government departments, NGOs, INGOs, UN, IFRC, emergency response agencies and private sector</i>)
Major activities for non formal disaster education	class room training, exercises, simulations, videos, discussion forums and interactive lectures
Objectives of the Training/Program (Relevant)	1. Design and conduct community based disaster risk assessment;2. Identify measures for hazard & vulnerability reduction & community capacity building;3. Prepare a risk reduction plan & how to integrate it in development activities;4. Analysis problems in implementation of community based risk reduction plans;
Methods of Education (General)	training that includes exercises, simulations, videos, discussion forums and interactive lectures
Duration	18-20th August 2005
Funding Agency	participants need to pay unknown
Evaluation System	Not Done / Don't know
Conducted by	ADPC
Partners	
Disaster education as Independent or part of larger program	independent
Regular or project based activities	project based
Others/Characteristics/Remarks	similar to other regional training course on CBDRM at Thailand
Website	http://www.humanitarianinfo.org/sumatra/reference/workshop/docs/CommunityBasedDisasterRiskManagementCourse-BandaAceh-18-20Aug05-AsianDisasterPreparednessCentre.pdf

No	59
Country	China
Program Name	Community-Based Earthquake-Monitoring System in Xinjiang
Hazard Type	earthquake
Target Group	communities, government officials, schools
Major activities for non formal disaster education	1. Establish community based earthquake monitoring system 2. Raise awareness in Xinjiang of the usefulness of a community-based earthquake-monitoring system. 3. Conduction of on-site training upon completion of each community-based earthquake-monitoring station. 4. Publication of training materials and disaster education materials
Objectives of the Training/Program (Relevant)	
Methods of Education (General)	training;awareness raising;workshops;public education campaigns
Duration	April-September 2003 (<i>after an earthquake disaster of 6.8 richter</i>)
Funding Agency	UNDP - US\$ 50,000 and Foundation for Research and International Education relating to Natural Disasters FRIEND -US\$ 20,000
Evaluation System	Not Done / Don't know
Conducted by	The China International Center for Economic and Technical Exchanges (CICETE), and The Chinese Academy of Sciences (CAS)
Partners	
Disaster education as Independent or part of larger program	part of the program
Regular or project based activities	project based
Others/Characteristics/Remarks	projected completed and included trainings to local government officials, womens, school childrens including public awareness campaigns on earthquake preparedness.
Website	http://www.globalwatch.org/ungp/cpr03612.pdf

No	60
Country	Vietnam
Program Name	Flood Proofing for Households in the Mekong Delta Vietnam;
Hazard Type	flood
Target Group	communities;disaster officials
Major activities for non formal disaster education	1) training of disaster officials and the affected populations on the use of flood mapping
Objectives of the Training/Program (Relevant)	1) training of disaster officials and the affected populations on the use of flood mapping to reduce loss of life, economic consequences, and disruption of livelihoods; 2) implementation of river flood alert systems in three river basins in central Vietnam; and 3) a television and radio flood disaster warning system at the national level and in three provinces of Vietnam.
Methods of Education (General)	trainings;dissemination
Duration	September 2005 -October 2006.
Funding Agency	USAID/OFDA - \$1,394,250
Evaluation System	Not Done / Don't know
Conducted by	UNDP
Partners	Government of Vietnam's (GVN) Ministry of Agriculture and Rural Development,
Disaster education as Independent or part of larger program	part of the larger program
Regular or project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/asia/fy2006/asia_dp_fs01_09-30-2006.pdf

No	61
Country	ASEAN nations (<i>Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam</i>)
Program Name	ASEAN Regional Programme on Disaster Management (ARPDM)
Hazard Type	Multi hazard
Target Group	member countries
Major activities for non formal disaster education	1)trainings in damage needs assessment, collapsed search and rescue, forest fire; 2)public awareness;3) publications news letter ;4) websites;5)DM in school curricula; 6)simulations, 7) ASEAN Day for disaster management
Objectives/activities of the Training/Program (Relevant)	To enhance cooperation in all aspects of disaster management including prevention, mitigation, preparedness, response and recovery through mutual collaborative activities.
Methods of Education	trainings; publicawareness; publications; websites;curricula; projects; simulations
Duration	2004 - 2010
Funding Agency	United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), European Commission Humanitarian Aid Office (ECHO), and United Nations High Commissioner for Refugees (UNHCR)
Evaluation System	
Conducted by	Mekong River Commission (MRC), Asian Disaster Preparedness Center (ADPC), Zusammenarbeit (GTZ) GmbH. ADPC, ADRC, IFRC, Pacific Disaster Center (PDC), Tropical Cyclone Panel/ The Typhoon Committee, Partnership Arrangements, UNICEF, UNHCR, UNISDR, UNOCHA, ASEAN Dialogue Partners, such as the United States, China, Japan and Korea Other countries and relevant agencies
Partners	Various government ministries, communitybased organisations, international and national NGOs and donors
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.aseansec.org/5187-1.pdf

No	62
Country	Asia-Pacific Region
Program Name	Reducing Vulnerability of School Children to Earthquakes
Hazard Type	Earthquakes
Target Group	School childrens, teachers and community, masons, engineers
Major activities for non formal disaster education	1) Retrofit schools in participatory way, 2)training for technicians for safer construction practices, 3) preparation and dissemination of disaster education materials like booklets, posters, CD ROM for awareness
Objectives/activities of the Training/Program (Relevant)	1. To enhance the seismic safety of schools through retrofitting of school buildings, disaster education and training of teachers and students 2. To build safer communities through demonstration of school retrofitting, training of masons and technicians, community workshop, and educational campaigns 3. To disseminate a culture of safe schools and safe communities through regional and international workshops
Methods of Education	retrofitting;trainings;disaster education, public awareness
Duration	April 2005 - April 2007
Funding Agency	United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), European Commission Humanitarian Aid Office (ECHO), and United Nations High Commissioner for Refugees (UNHCR)
Evaluation System	
Conducted by	Fiji - National Disaster Management Office (NDMO), Fiji Institute of Technology (FIT), Centre for Appropriate Technology and Development (CATD), India- India Simla District Commissioner's Office, Himachhal State Government, Sustainable Environment and Ecological Development Society (SEEDS), Indonesia- Indonesia National Department of Education (DOE), Nangroe Aceh Darussalam (NAD), Provincial Government, Institute of Technology Bandung (ITB), Uzbekistan Uzbekistan Tashkent City Office, Uzbek Research Institute for Typical and Experimental Building (UzLITTI)
Partners	Various government ministries, communitybased organisations, international and national NGOs and donors
Disaster education component (independent OR part of the program)	Independent
Regular OR project based activities	project based
Others/Characteristics/Remarks	On going
Website	http://www.hyogo.uncrd.or.jp/school%20project/schoolprojectreport.htm#result

No	63
Country	Sri Lanka
Program Name	Community Based Disaster Risk Management
Hazard Type	Multi hazard
Target Group	local governments officials, communities
Major activities for non formal disaster education	1) training of trainees for government officials and then they train communities, 2) disaster prevention tour, 3)workshop for hazard mapping
Objectives/activities of the Training/Program (Relevant)	to increase disaster reduction capacity at the community level
Methods of Education	trainings;workshops
Duration	April 2006 - April 2007
Funding Agency	Japanese Ministry of Foreign Affairs
Evaluation System	Not Done / Don't know
Conducted by	ADRC(Asian Disaster Reduction Centre)
Partners	Local governments
Disaster education component (independent OR part of the program)	Independent
Regular OR project based activities	project based
Others/Characteristics/Remarks	this projects includes trainings, workshops plans to hold up to 100 community-based workshops in Galle, which are expected to benefit 4,000 people.
Website	http://www.adrc.or.jp/highlights/NewsNo141

No	64
Country	Japan
Program Name	Disaster Prevention Education in Schools
Hazard Type	Multi hazard
Target Group	school principals and officials, ministry of education officials, from five countries Indonesia, Malaysia, the Maldives, Sri Lanka and Thailand.
Major activities for non formal disaster education	1) trainings that had lectures on disaster prevention education systems, disaster prevention teaching materials, and manuals on disaster prevention education in schools., 2) attended classes on disaster education
Objectives/activities of the Training/Program (Relevant)	to provide opportunities for people involved in school education in the countries affected by the Indian Ocean Tsunami to learn about disaster prevention education in Japan and to promote disaster prevention education in schools in their own countries.
Methods of Education	trainings; lectures
Duration	28 August to 15 September 2006.
Funding Agency	JICA
Evaluation System	Not Done / Don't know
Conducted by	ADRC (Asian Disaster Reduction Centre)
Partners	
Disaster education component (independent OR part of the program)	Independent
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo153

No	65
Country	Sri Lanka
Program Name	Disaster Education Program in Galle District, Sri Lanka
Hazard Type	Multi hazard
Target Group	Teachers and school childrens
Major activities for non formal disaster education	1) training of trainees, 2) meetings on the development of cirricula and its implementation in 15 schools as pilot program, 3) Celebration of disaster education week in first week of July
Objectives/activities of the Training/Program (Relevant)	to raise the school community's awareness of various types of natural disasters and of the value of disaster reduction.
Methods of Education	trainings; workshops; cirricula development, awareness raising by celebration
Duration	Since February 2007
Funding Agency	USAID
Evaluation System	Not Done / Don't know
Conducted by	The Asian Disaster Reduction Center (ADRC) and the Southern Provincial Department of Education of Sri Lanka,
Partners	
Disaster education component (independent OR part of the program)	Independent
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo161

No	66
Country	South Asia (<i>India, Indonesia and Bangladesh</i>)
Program Name	Tsunami Awareness Workshops Using "Inamura no Hi" in India, Indonesia and Bangladesh
Hazard Type	Tsunami
Target Group	School teachers, students, local NGOs, local governments communities, religious group leaders
Major activities for non formal disaster education	1) workshops to promote disaster education in schools and disaster awareness 2)booklets, 3) drama, songs etc
Objectives/activities of the Training/Program (Relevant)	to raise public awareness of tsunami disasters, using the Japanese tsunami educational story of "Inamura no Hi.
Methods of Education	publications, workshops
Duration	since 2006
Funding Agency	UNESCO/IOC and UN/ISDR.
Evaluation System	
Conducted by	ADRC (Asian Disaster Reduction Centre)
Partners	Asian Disaster Reduction and Response Network (ADRRN), namely SEEDS, MERCY Malaysia, and the Bangladesh Disaster Preparedness Center (BDPC)
Disaster education component (independent OR part of the program)	Independent
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo144

No	67
Country	Turkey
Program Name	ABCD Basic Disaster Awareness Training
Hazard Type	Multi hazard
Target Group	School Teacher, students and parents
Major activities for non formal disaster education	training
Objectives/activities of the Training/Program (Relevant)	Disaster awareness raising
Methods of Education	training
Duration	2001- 2003
Funding Agency	United States Agency for International Development, Office of Foreign Disaster Assistance and UNDP, IULA-EMME the Swiss Development and Cooperation organization
Evaluation System	Not Done / Don't know
Conducted by	AHEP - Ministry of Education
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	Teachers reported that ABCD Basic Disaster Awareness Training was given to 33.795 teachers, 5.990 school personnel, 825.754 students and 356.128 parents by the end of 2002.
Website	http://www.ahep.org/ev/egitim5_0e.htm

No	68
Country	Turkey
Program Name	Countrywide Basic Disaster Awareness Training Project
Hazard Type	Multi hazard
Target Group	School Teacher, students and parents
Major activities for non formal disaster education	training
Objectives/activities of the Training/Program (Relevant)	to disseminate ABCD Basic Disaster Awareness training in primary and secondary school in all over Turkey
Methods of Education	training
Duration	January 2004 - December 2005
Funding Agency	
Evaluation System	Not Done / Don't know
Conducted by	AHEP - Bogazici University, Kandilli Observatory and Earthquake Research Institute and the Republic of Turkey, Ministry of Education
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	
Others/Characteristics/Remarks	These 25,000 teachers will provide training to other teachers, school staff, students and parents in their schools, reaching more than 5 million children by then end of 2005.
Website	http://www.ahep.org/ev/eqitim5_0e.htm

No	69
Country	Yemen
Program Name	Disaster Preparedness, Management and Recovery Programme
Hazard Type	Multi hazard
Target Group	communities and governments officials
Major activities for non formal disaster education	1) drills, 2) training 3) public awareness, 4) dm in school cirricula
Objectives/activities of the Training/Program (Relevant)	to strengthen disaster preparedness, management, response, and mitigation plans of communities, local governments, and district authorities all over the country.
Methods of Education	drills, cirricula
Duration	1997 - 2006
Funding Agency	United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), European Commission Humanitarian Aid Office (ECHO), and United Nations High Commissioner for Refugees (UNHCR)
Evaluation System	
Conducted by	Yemen Government-UNDP
Partners	• Ministry of Planning and Development • Ministry of Interior-Civil Defence General Department • Central state and local governments • National- and state-level training institutions • Other national-level institutions • UN Disaster Thematic Group • Local and international NGOs working in the country (Yemeni Red Crescent, Oxfam, Medecins Sans Frontieres, etc.)
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/arabstates/yemen.pdf

No	70
Country	Maldives
Program Name	Disaster Risk Management Program
Hazard Type	Multi hazard
Target Group	communities, government officials
Major activities for non formal disaster education	1) training, 2) awareness raising to communities,3) exposure visits
Objectives/activities of the Training/Program (Relevant)	The objectives of the program is Establish an Institutional Framework and Policy for Disaster Management Develop Multi Hazard Preparedness and Response Plans at the National, Atoll and Island level Awareness, Training and Capacity Building activities
Methods of Education	training;activities;awareness raising; exposure visits
Duration	01 January 2005 - 31 December 2006
Funding Agency	UNDP - US\$ 4, 400,000
Evaluation System	
Conducted by	UNDP Maldives
Partners	IFRC,government of maldives
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.mv.undp.org/index.aspx?PagelId=14&ButtonOrder=001.003.005

No	71
Country	Thailand
Program Name	Education for Disaster Preparedness in Primary School
Hazard Type	Multi hazards (<i>focus tsunami</i>)
Target Group	teachers, school children, educators, families, government officials
Major activities for non formal disaster education	1)workshops with pilot classes and evacuation drills, 2)organize a seminar on tsunami disaster education for teachers, educators and government officials 3)develop and distribute a teaching guide to deliver tsunami disaster education 4)
Objectives/activities of the Training/Program (Relevant)	transfer Japan's disaster education knowledge to school in affected areas in Thailand, and consequently, to encourage conversation on natural disasters among families as well as to increase the whole community's capabilities to natural disasters.
Methods of Education	workshop;seminar; drills; publications, teaching guides; education material development
Duration	Since 2006 (<i>after 2004 Tsunam</i>)
Funding Agency	UNESCO/IOC
Evaluation System	Not Done / Don't know
Conducted by	ADRC (Asian Disaster Reduction Centre)
Partners	Thai government
Disaster education component (independent OR part of the program)	Independent
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo133.pdf

No	72
Country	Central Asia (<i>Kazakhstan, Kyrgyzstan, Turkmenistan and Uzbekistan</i>)
Program Name	Disaster management
Hazard Type	Multi hazard
Target Group	National societies (Red Cross Societies) and communities
Major activities for non formal disaster education	1) community-based disaster preparedness (CBDP) and risk reduction programmes (community awareness and education) 2)vulnerability capacity assesment, 3) Risk mapping and risk reduction activities (tree plantation, river bank re-enforcement)
Objectives/activities of the Training/Program (Relevant)	The disaster preparedness and response capacities of vulnerable communities and Central Asia National Societies (CANS) will be increased through improved community based disaster preparedness (CBDP), community-based mitigation projects, and improved disaster management capacity in the region.
Methods of Education	vulnerability capacity assesment;community-based disaster preparedness (CBDP) and risk reduction programmes
Duration	2006 - 2007
Funding Agency	IFRC - 2,112,000
Evaluation System	Not Done / Don't know
Conducted by	IFRC and Respective Red Cross and Red Crescent Societies
Partners	
Disaster education component (independent OR part of the program)	Independent
Regular OR project based activities	project based
Others/Characteristics/Remarks	The community-based disaster preparedness and mitigation activities will include community awareness and education, such as promotion of early warning systems, community risk mapping activities and small-scale mitigation projects, to reduce disaster risks.
Website	http://www.ifrc.org/docs/appeals/annual06/MAA70001.pdf

No	73
Country	Tajikistan
Program Name	CCDR training for local NGO
Hazard Type	Multi hazard - <i>Country Specific(earthquake, fires, mud-flows, floods, landslides)</i>
Target Group	Local NGO people
Major activities for non formal disaster education	1) Training
Objectives/activities of the Training/Program (Relevant)	raising awareness of the local organizations' representatives in relation to the disaster management principles.
Methods of Education	trainings
Duration	June 27-29, 2006
Funding Agency	unknown
Evaluation System	Not Done / Don't know
Conducted by	Swiss Agency on Development and Cooperation in Tajikistan "Centre of Competence for Disaster Reduction"
Partners	
Disaster education component (independent OR part of the program)	Independent
Regular OR project based activities	project based
Others/Characteristics/Remarks	Similar training will be conducted for school teachers
Website	http://www.ccdr.tj/downloads/Newsletter.%20June%202006%20eng.pdf

No	74
Country	Afganistan
Program Name	Capacity Building of the Government for Disaster Preparedness
Hazard Type	Multi hazard
Target Group	government officials, schools and families
Major activities for non formal disaster education	1)Disaster management training 2) awareness raising projects
Objectives/activities of the Training/Program (Relevant)	An active and functioning National Disaster Preparedness institution to fulfill the government mandate as the national coordination body for disaster response.
Methods of Education	trainings, awareness raising projects
Duration	May 2002 – May 2003
Funding Agency	UNDP - Budget: \$1.0m
Evaluation System	Not Done / Don't know
Conducted by	
Partners	
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	• Provide adequate DM training • Carry out disaster awareness and preparedness projects for high-risk regions for local governments, schools and families
Website	http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN019503.pdf

No	75
Country	Afganistan
Program Name	Disaster Management Programme
Hazard Type	Multi hazard
Target Group	Afganistan Red Cross Society (ARCS) and ultimately communities
Major activities for non formal disaster education	1) training
Objectives/activities of the Training/Program (Relevant)	Increase ARCS's disaster preparedness and response capability.
Methods of Education	training;awareness
Duration	
Funding Agency	Red Cross
Evaluation System	
Conducted by	IFRC
Partners	
Disaster education component (independent OR part of the program)	
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN019503.pdf

No	76
Country	Afganistan
Program Name	Disaster Preparedness and Management Capacity Building
Hazard Type	Multi hazard
Target Group	Government officials (Office of disaster preparednes(ODP)
Major activities for non formal disaster education	1) Study tour in different countries, 2) Disaster Management training course
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	training;study tours
Duration	2002 - unknown
Funding Agency	ADB
Evaluation System	
Conducted by	Institute for Disaster Risk Management, Philippines,
Partners	
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	

No	77
Country	Mongolia
Program Name	Disaster preparedness and disaster relief
Hazard Type	Multi hazard
Target Group	communities, local red cross societies
Major activities for non formal disaster education	1) Training, 2)Information dissemination through media
Objectives/activities of the Training/Program (Relevant)	To prevent disasters, to increase disaster preparedness, to provide disaster relief promptly and to provide psychological and material support to the disaster affected.
Methods of Education	training, dissemination
Duration	regular program
Funding Agency	Red Cross
Evaluation System	Not Done / Don't know
Conducted by	Mongolian Red Cross Society (MRCS)
Partners	
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	regular
Others/Characteristics/Remarks	This program is a part of regular program of MRCS
Website	http://www.redcross.mn/english/disaster.html

No	78
Country	Vietnam
Program Name	Reducing flood and storm vulnerability in Quang Ngai Province
Hazard Type	Multi hazard (<i>floods and storms</i>)
Target Group	households, hamlets, communes, districts and other agencies;
Major activities for non formal disaster education	1)training in disaster reduction, planning and implementation
Objectives/activities of the Training/Program (Relevant)	project aims to reduce the vulnerability to natural disasters of targeted communes in Mo Duc and Duc Pho Districts of Quang Ngai Province, specifically their vulnerability to flooding in irrigated agriculture areas during the typhoon season.
Methods of Education	training, documentation
Duration	October 2004 - September 2009
Funding Agency	AusAID, Vietnam Australia NGO Co-operation Agreement Program (VANGOCA) - AUS\$ 2,921,840
Evaluation System	Not Done / Don't know
Conducted by	World Vision Vietnam
Partners	
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.worldvision.org.vn/index.php?option=com_content&task=view&id=26&Itemid=95

No	79
Country	India
Program Name	Disaster risk management programme: Khordha
Hazard Type	Multi hazard
Target Group	Communities, officers, scouts, village volunteers
Major activities for non formal disaster education	1) Training of trainees in disaster management, 2) training in search and rescue, first aid, volunteers 3) formation of Disaster management (DM) committees and their dm plan
Objectives/activities of the Training/Program (Relevant)	The programme aims at sustainable reduction in risks associated with natural disasters in these districts.
Methods of Education	training,dm plan, dm committees
Duration	
Funding Agency	UNDP, Rs. 12,58,660
Evaluation System	
Conducted by	Govt. of India, and UNDP
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://khordha.nic.in/disaster/Disaster%20Risk%20Management%20Programme%20of%20Khordha%20District.pdf

No	80
Country	Viet Nam
Program Name	Preparedness for Disasters related to Climate Change
Hazard Type	Multi hazard (<i>natural disaster induced by climate change</i>)
Target Group	communities, red cross volunteers
Major activities for non formal disaster education	1) raise awareness on relationship between climate change and disaster preparedness 2)workshops & seminars, 3)train red cross, 4)train communities in first aid
Objectives/activities of the Training/Program (Relevant)	to strengthen the capacity of the Vietnamese people to adapt and respond to natural disasters that are enhanced by climate change.
Methods of Education	trainings;publications;awareness raising;workshops
Duration	May 2003 – December 2005
Funding Agency	
Evaluation System	Not Done / Don't know
Conducted by	Viet Nam Red Cross Society, RC/RC Climate Centre (the Hague, Netherlands), Netherlands Red Cross
Partners	
Disaster education component (independent OR part of the program)	
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.climatecentre.org/downloads/File/asia_and_pacific/DPCC%20Viet%20Nam%202003-2005.pdf

No	81
Country	Maldives
Program Name	Support to the disaster risk management
Hazard Type	Multi hazard (<i>country specific that includes - rising sea levels, storm surge and tsunamis</i>).
Target Group	government officials, experts and communities that includes women, fishermen, volunteers
Major activities for non formal disaster education	1) train government officials, national sectoral experts, other chief officials, womens, volunteers on disaster risk management, 3)develop training manuals and handbook, 4)information campaign, 5) include dm in school cirricula
Objectives/activities of the Training/Program (Relevant)	<ul style="list-style-type: none"> • To establish an institutional framework for disaster management; • To develop multi-hazard preparedness and response plans; • To develop training and capacity building activities: early warning systems, fully equipped emergency operations centres, preparedness plans and safe shelters.
Methods of Education	trainings;publications;workshops; cirricula; information campaign
Duration	01/1/2005 - 31/12/2006
Funding Agency	UNDP - Budget: 3.26 million US\$
Evaluation System	Not Done / Don't know
Conducted by	UNDP
Partners	Various government ministries, communitybased organisations, international and national NGOs and donors
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.undp.org/bcpr/documents/dru/proj_fact/FactsheetMaldives_final.pdf

No	82
Country	Cambodia and Vietnam
Program Name	Flood Management and Mitigation Programme (FMMP) - Flood Emergency Management Strengthening
Hazard Type	flood
Target Group	civil authorities at various levels, emergency managers, school childrens and communities
Major activities for non formal disaster education	1) training, 2)workshops 3)awareness campaigns by publishing posters, booklets, films 4)study tours
Objectives/activities of the Training/Program (Relevant)	To see emergency management systems in the riparian countries dealing more effectively with Mekong floods.
Methods of Education	trainings;workshops;awareness campaigns;study tours;publications
Duration	September 2004 to June 2007
Funding Agency	Zusammenarbeit (GTZ) GmbH.
Evaluation System	Not Done / Don't know
Conducted by	Mekong River Commission (MRC), Asian Disaster Preparedness Center (ADPC), Zusammenarbeit (GTZ) GmbH.
Partners	Cambodia National Mekong Committee, National Committee on Disaster Management, Provincial and District Committees on Disaster Management, Department of Hydrology and River Works Ministries Cambodian, Red Cross and IFRC, Viet Nam National Mekong Committee, Standing Office for Central Committee of Flood and Storm Control, Provincial and District People's Committees, Viet Nam Hydrometeorological Services, Institute of Water Resources Planning, Vietnam Red Cross &IFRC, Women's Union
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.mrcmekong.org/download/programmes/FMMP/fmmp_comp4_details.pdf

No	83
Country	Laos
Program Name	Community Based Disaster Management in Ta Oy
Hazard Type	Multi hazard
Target Group	communities and government
Major activities for non formal disaster education	training in community based DM
Objectives/activities of the Training/Program (Relevant)	strengthen the disaster preparedness and response mechanisms at community and government level.
Methods of Education	trainings;awareness raising
Duration	
Funding Agency	
Evaluation System	
Conducted by	Oxfam New Zealand
Partners	other Oxfam
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.oxfam.org.au/world/asia/laos/

No	84
Country	Vietnam
Program Name	Disaster Preparedness and Response
Hazard Type	Multi hazard
Target Group	Communities and red cross volunteers
Major activities for non formal disaster education	1) training in disaster responding skills to red cross volunteers and people, 2)awareness raising in communities
Objectives/activities of the Training/Program (Relevant)	to help minimize impacts of disasters by raising awareness in community on disaster preparedness, organizing works of prevention and response to disasters as well as works of relief and recovery
Methods of Education	training;awareness raising; capacity building activities
Duration	regular program
Funding Agency	
Evaluation System	Not Done / Don't know
Conducted by	Vietnam Red Cross Society
Partners	regular program
Disaster education component (independent OR part of the program)	Independet
Regular OR project based activities	regualr
Others/Characteristics/Remarks	Major activities carried out includes: training on disaster responding skills to Red Cross staffs and people, dissemination in community, capacity building, construction of disaster preparedness and response centres, mangrove forestation and distributions to disaster hit people.
Website	http://www.vnrc.org.vn/field.asp

No	85
Country	Laos
Program Name	Disaster Risk Reduction Project
Hazard Type	Multi hazard
Target Group	communities
Major activities for non formal disaster education	1)Training for capacity building 2) awareness raising
Objectives/activities of the Training/Program (Relevant)	to gradually reduce the vulnerability of poor women and men to natural and man-made disasters through community based approaches.
Methods of Education	training; awareness raising
Duration	Jun 1, 2004 - Nov 30, 2006
Funding Agency	AusAID - US \$270,000.00
Evaluation System	Not Done / Don't know
Conducted by	Oxfam Austrailia
Partners	Ministry of Labour and Social Welfare
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.directoryofngos.org/project.cfm?id=290

No	86
Country	Malaysia
Program Name	Training of trainers in Community-Based Disaster Risk Management (CBDRM).
Hazard Type	Multi hazard
Target Group	Civil Defense, Fire, Irrigation and Drainage, teachers, volunteers and staff members of MERCY Malaysia
Major activities for non formal disaster education	training of trainers
Objectives/activities of the Training/Program (Relevant)	to increase awareness of the local authorities and residents regarding the importance of CBDRM and community involvement.
Methods of Education	training
Duration	23rd -24th of February 2007
Funding Agency	
Evaluation System	Not Done / Don't know
Conducted by	MERCY Malaysia
Partners	
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.mercy.org.my/read.php?id=88

No	87
Country	Vietnam
Program Name	Disaster Preparedness concerned to Climate Change
Hazard Type	Multi hazard (<i>Climate Change risks</i>)
Target Group	authorities, organizations and people
Major activities for non formal disaster education	capacity building
Objectives/activities of the Training/Program (Relevant)	Building capacity of authorities, organizations and people in Vietnam on adoption, preparedness and response to disaster relating to Climate change
Methods of Education	capacity building
Duration	2003-2005 (3 phases)
Funding Agency	Netherlands Government through Netherlands Red Cross - EUR 315,000
Evaluation System	Done
Conducted by	Vietnamese Red Cross collaborates with local authorities and sector departments at province
Partners	1 Netherlands Red Cross 2 Vietnamese Red Cross (VNRC) 3 Hydro-Meteorological Service (HMS).
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.vnrc.org.vn/field.asp

No	88
Country	Vietnam
Program Name	Mangrove Forestation – Disaster Preparedness
Hazard Type	Multi hazard (<i>sea storm and typhoons</i>)
Target Group	Communities and Red Cross members
Major activities for non formal disaster education	capacity building
Objectives/activities of the Training/Program (Relevant)	1. Being prepared for disasters caused by sea storm and typhoons 2. Building capacity for RC at all levels on disaster response and preparedness as well as organisational development 3..Building capacity of seashore residents on protection and management of mangrove forest, Disaster preparedness planning and implementing
Methods of Education	capacity building
Duration	1997-2005 (2 phases)
Funding Agency	Japanese Red Cross
Evaluation System	Not Done / Don't know
Conducted by	Vietnamese Red Cross
Partners	
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.vnrc.org.vn/project.asp

No	89
Country	Cambodia
Program Name	Community Based Disaster Preparedness (CBDP)
Hazard Type	Multi hazard
Target Group	Communities
Major activities for non formal disaster education	trainings
Objectives/activities of the Training/Program (Relevant)	Process of community participation, empowerment and finding solutions to prepare for and respond to natural disasters.
Methods of Education	trainings;Hazard, Vulnerability and Capacity Assessment ;planning
Duration	Sep-98
Funding Agency	Red Cross
Evaluation System	Done
Conducted by	Cambodian Red Cross Society
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	regular program
Others/Characteristics/Remarks	
Website	http://www.redcross.org.kh/services/disaster.htm

No	90
Country	Yemen
Program Name	Yemen Red Crescent Disaster Preparedness Programme
Hazard Type	Multi hazard
Target Group	Volunteers of Yemen Red Cross Society and government staffs
Major activities for non formal disaster education	1)trainings in disaster preparedness
Objectives/activities of the Training/Program (Relevant)	1. Improve the disaster response capacity of the YRCS. 2. Provide training in various aspects of Disaster Preparedness at the branch and HQ level. 3. Take the lead in Yemen to co-ordinate NGO participation in the Government of Yemen National Disaster Plan.
Methods of Education	trainings
Duration	
Funding Agency	IFRC & RCS
Evaluation System	Done
Conducted by	
Partners	
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	proposal for the development of YRCS
Website	http://www.ifrc.org/docs/rascas/gulfras.asp

No	91
Country	Indonesia
Program Name	Disaster management programme: the CARE DISPRE (DISaster PREparedness)
Hazard Type	Multi hazard (<i>country specific - fire specific</i>)
Target Group	Communities
Major activities for non formal disaster education	1) participatory learning and action program, 2) training in disaster management 3) vision mapping 4) workshops
Objectives/activities of the Training/Program (Relevant)	to reduce vulnerabilities of communities to disasters in general
Methods of Education	Participatory learning and action (PLA); Training; workshop; vision mapping
Duration	
Funding Agency	CARE
Evaluation System	Others
Conducted by	CARE
Partners	
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.fire.uni-freiburg.de/Manag/CiF-Ch-10-Disaster.pdf

No	92
Country	Central Asia (<i>Tajikistan, Kyrgyzstan and Uzbekistan</i>)
Program Name	Awareness Building for Integrated Local Risk Management
Hazard Type	Multi hazard
Target Group	local communities, Government collaborators, NGOs
Major activities for non formal disaster education	1) workshops, 2) Development and testing of Awareness Building learning module, 3) Exhibitions, 4) Films
Objectives/activities of the Training/Program (Relevant)	The aim of the project is to build and strengthen awareness on Integrated Local Risk Management with focus on prevention and preparedness at the local level in rural and semi-urban areas in Tajik, Kyrgyz and Uzbek mountainous regions.
Methods of Education	Development and testing of Awareness Building learning module; workshop, films; exhibitions
Duration	1.8.2004 – 30.2.2006)
Funding Agency	Swiss Agency of Development and Cooperation
Evaluation System	Not Done / Don't know
Conducted by	Central Asian Mountain Partnership Program (CAMP), implemented by the Centre for Development and Environment (CDE) of the University of Bern
Partners	CARITAS, NGO Nilufar, Dom Kino
Disaster education component (independent OR part of the program)	(independent)
Regular OR project based activities	project based
Others/Characteristics/Remarks	Completed project
Website	http://www.untj.org/react/Tajikistan%20factsheets.pdf

No	93
Country	Tajikistan
Program Name	Remote Hazards Assessment in Western Pamir, GBAO, Tajikistan
Hazard Type	Multi hazard
Target Group	local authorities, decision makers, communities other operational level people
Major activities for non formal disaster education	1) Awareness building among local authorities, decision makers and the population
Objectives/activities of the Training/Program (Relevant)	Elaboration of disaster reduction plans based on the hazard assessment (processes, intensity, recurrence) and damage potential (vulnerability). Know-how transfer to the Tajik experts. Awareness building among local authorities, decision makers and the population involved, in coordination with other projects already initiated
Methods of Education	awareness building
Duration	
Funding Agency	Swiss Agency of Development and Cooperation
Evaluation System	Not Done / Don't know
Conducted by	Institute for Applied Geosciences at the University of Vienna (IAG BOKU)
Partners	Ministry of Emergency Situations, national earth-scientists, FOCUS Humanitarian Assistance TJ
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	completed project
Website	

No	94
Country	Tajikistan
Program Name	Disaster preparedness action plan Tajikistan, Year 2, (Dipact-2)
Hazard Type	Multi hazard
Target Group	Community based organisations (CBOs), Communities that include local authorities, teachers and school officials, and the public at large, especially school children
Major activities for non formal disaster education	
Objectives/activities of the Training/Program (Relevant)	To strengthen the capacity of 60 community-based organizations located in high-risk communities from three districts of Tajikistan to undertake disaster appropriate and sustainable disaster preparedness and mitigation activities. As a consequence, the CBOs and communities will be able to effectively prepare for, respond to, and reduce losses and suffering as a result of disasters.
Methods of Education	Awareness building activities, community contingency plans; effective dissemination of information, good practice and lessons learned ; implement small-scale mitigation projects
Duration	June, 2004- August, 2005
Funding Agency	European Commission Humanitarian Aid (ECHO)
Evaluation System	Not Done / Don't know
Conducted by	CARE Tajikistan
Partners	Community Based Organizations, District Department of Emergency, Ministry of Emergency Situation and Districts Hukumats
Disaster education component (independent OR part of the program)	(Independent)
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.untj.org/react/Tajikistan%20factsheets.pdf

No	95
Country	Tajikistan
Program Name	ECHO Disaster Preparedness Programme (DIPECHO), Action Plan for Central Asia ECHO Humanitarian assistance to Tajikistan
Hazard Type	Multi hazard
Target Group	Communities
Major activities for non formal disaster education	
Objectives/activities of the Training/Program (Relevant)	To reduce the impact of natural disasters by strengthening the relevant local physical and human resources in high-risk areas, by: - strengthening the capacity of local communities to predict, respond to and cope with disasters and - protecting vulnerable groups from likely natural disasters through small scale infrastructure works ECHO: emergency response to disasters.
Methods of Education	
Duration	May 2003 –July 2004 May 2004 –July 2005
Funding Agency	DIPECHO - €2,500,000 + €3,000,000
Evaluation System	Done
Conducted by	
Partners	Aga Khan Foundation / FOCUS Humanitarian, ACTED, CARE Netherlands, German Agro Action, Hilfswerk Austria, IFRC / Uzbek Red Crescent Society, IOM / Shelter for Life, Mercy Corps Scotland, MERLIN, Netherlands Red Cross /Kyrgyz Red Crescent Society and Tajik Red Crescent Society, UNDP
Disaster education component (independent OR part of the program)	
Regular OR project based activities	
Others/Characteristics/Remarks	There are many projects under this ECHO and DIPECHO funding by partners most of them are highlighted below
Website	http://www.untj.org/react/Tajikistan%20factsheets.pdf

No	96
Country	Tajikistan
Program Name	Dushanbe Earthquake Safety Initiative
Hazard Type	Earthquake
Target Group	Communities, NGOs, public agencies and business agencies
Major activities for non formal disaster education	1) Awareness raising activities 2) train in risk mitigation, basic disaster awareness 3) publication of public education materials and training curricula 4) symposium 5) family and organisation disaster plans
Objectives/activities of the Training/Program (Relevant)	1. Raise the awareness of residents, non governmental organizations, public agencies and businesses of Almaty, Dushanbe and Tashkent about their high risks from earthquakes and options to mitigate that risk. 2. Train residents, non governmental organizations, public agencies and businesses of these cities in risk mitigation.
Methods of Education	training; Information-sharing and community-planning through broad annual stakeholder symposium and risk reduction report, awareness raising
Duration	September 2002-September 2005
Funding Agency	United States Agency for International Development/Office of Foreign Disaster Assistance
Evaluation System	Not Done / Don't know
Conducted by	FOCUS Humanitarian Assistance (USA) PMP Tajikistan with GeoHazards International - Central Asian Region Earthquake Safety Initiative (CARES)
Partners	Ministry of Emergency Situations and Civil Defence, Institute of Seismology and Seismic Resistant Construction, Tajik Technical University, ACTED, Shelter for Life, CARE, Avesto, For Earth, Tajik Red Crescent Society, Zan wa Zamin, Department of Health
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	status not known
Website	http://www.untj.org/react/Tajikistan%20factsheets.pdf

No	97
Country	Tajikistan
Program Name	"A participatory approach for the formation of disaster-resistant communities in Central Asia"
Hazard Type	Multi hazard
Target Group	Local Administration, schools and education institutions, 19 targeted communities RCST Volunteers
Major activities for non formal disaster education	1) Creation of Community Disaster Planning and Response Teams (CDPT; CDRT) at all local administration levels 2) First Aid and Rescue trainings in schools 3) Projects writing and mitigation approach trainings 4) Public Information Campaign 5) Disaster Public Exercise as practical way to evaluate gained skills
Objectives/activities of the Training/Program (Relevant)	<ul style="list-style-type: none"> • To enable communities to identify and profile potential hazards, compare and prioritise risks and create and apply scenarios. • To strengthen local response capacities through volunteer mobilization, organisation, equipment and training • To develop and implement Community Disaster Exercise Programmes, which involve stakeholders at local, regional and national level. • To increase disaster awareness and disaster preparedness by implementing first aid and disaster behaviour training on the household and school levels • To actively involve the community in the prioritisation, planning and implementation of small-scale regional mitigation projects
Methods of Education	trainings; Public Information Campaign etc
Duration	April 2003 – May 2005
Funding Agency	EC Directorate-General for Humanitarian Aid - ECHO
Evaluation System	
Conducted by	Hilfswerk Austria
Partners	Red Crescent Society of Tajikistan, Fire Department of Ministry of Interior, Ministry of Emergency Situations, Local Administration
Disaster education component (independent OR part of the program)	(independent)
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.untj.org/react/Tajikistan%20factsheets.pdf

No	98
Country	Tajikistan
Program Name	Enhance the disaster preparedness and response capacity of the Tajik Red Crescent Society and communities in Tajikistan
Hazard Type	Multi hazard
Target Group	Tajik Red Crescent Society and communities
Major activities for non formal disaster education	1) trainings & workshops on disaster preparedness and disaster reduction, 2) public awareness campaign, 3) establishment of community disaster teams
Objectives/activities of the Training/Program (Relevant)	Improve the capacity of the Tajikistan Red Crescent Society to respond to future disasters through a consolidated disaster preparedness and response approach by enhancing the active participation of the communities
Methods of Education	Trainings/Workshops; Public Awareness Campaign; Mitigation Micro projects
Duration	12 months
Funding Agency	DIPECHO
Evaluation System	
Conducted by	International Federation of Red Cross and Red Crescent Societies
Partners	Red Crescent Society of Tajikistan (implementing partner) Netherlands Red Cross (contract holder & co-financer)
Disaster education component (independent OR part of the program)	(independent)
Regular OR project based activities	project based
Others/Characteristics/Remarks	status not known
Website	http://www.untj.org/react/Tajikistan%20factsheets.pdf

No	99
Country	Tajikistan
Program Name	Community Based Disaster Risk Reduction with Earthquake Safer Construction Practices
Hazard Type	earthquake
Target Group	Community members, local masons& construction workers, local & national government officials, staff and students at Tajik Technical University, staff of Tajik NGOs/CBOs & International NGOs
Major activities for non formal disaster education	1) mason trainings, 2)awareness and preparedness training
Objectives/activities of the Training/Program (Relevant)	1. Strengthening the existing community based disaster management programme 2. Training local masons and construction workers in earthquake safer construction practices 3. Performing structural retrofitting and reinforcing of selected community structures 4. Facilitating institutionalization of community based disaster management
Methods of Education	Training; community based disaster management program
Duration	12 month project beginning June 1, 2004
Funding Agency	ECHO
Evaluation System	
Conducted by	International Organization for Migration
Partners	Shelter for Life
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	status not known
Website	http://www.untj.org/react/Tajikistan%20factsheets.pdf

No	100
Country	Central Asia (<i>Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan</i>)
Program Name	ISDR Disaster Reduction Programmes in Central Asia
Hazard Type	Multi hazard
Target Group	communities
Major activities for non formal disaster education	1) Increase public awareness to understand risk, vulnerability and disaster reduction, 2)Improve scientific knowledge about disaster reduction.
Objectives/activities of the Training/Program (Relevant)	aims at building disaster resilient communities by promoting increased awareness of the importance of disaster reduction as an integral component of sustainable development
Methods of Education	Public awareness programs
Duration	
Funding Agency	Norwegian government
Evaluation System	
Conducted by	UN/ISDR
Partners	Governments, NGOs and other UN agencies
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	
Others/Characteristics/Remarks	status not known
Website	http://www.untj.org/react/Tajikistan%20factsheets.pdf

No	101
Country	Central Asia (<i>Tajikistan, Kyrgyzstan and Uzbekistan</i>)
Program Name	Strengthening Regional Cooperation for a Community-based Approach to Disaster Preparedness in the Ferghana Valley
Hazard Type	Multi hazard
Target Group	communities, government bodies, civil defense forces
Major activities for non formal disaster education	1) training,2)disaster simulations, 3)conferences, 4)response groups
Objectives/activities of the Training/Program (Relevant)	To provide participating communities with the ability to prepare themselves for, and respond to, the occurrence of natural disasters. To strengthen government cooperation and support for an integrated regional approach to disaster preparedness and response that enhances community participation and decision making.
Methods of Education	trainings;simulation exercises
Duration	
Funding Agency	EC Directorate-General for Humanitarian Aid - ECHO
Evaluation System	
Conducted by	Mercy Corps
Partners	Provincial and district level Ministry of Emergency Situations (MES) divisions in Tajikistan, Kyrgyzstan and Uzbekistan • Other local government institutions at district and local levels. • Various local NGO partners in all countries. • National Societies of the International Red Crescent (NSRC) in Kyrgyzstan, Uzbekistan and Tajikistan.
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.untj.org/react/Tajikistan%20factsheets.pdf

No	102
Country	Tajikistan
Program Name	Community Action for Preparedness: engaging local actors to reduce the consequences of disaster
Hazard Type	Multi hazard
Target Group	communities, schools, district emergency coordination committee, community leaders
Major activities for non formal disaster education	1) Seminar, 2)training 3)development of the plan, 4)participatory planning, designing and implementing preparedness projects
Objectives/activities of the Training/Program (Relevant)	The specific objective of this project is the enhancement of local disaster management capacities to prevent and cope with the effects of disasters and to respond to the needs of the communities.
Methods of Education	Seminar, trainings;plan development
Duration	12 Months (1 June 2004—31 May 2005)
Funding Agency	DIP-ECHO
Evaluation System	
Conducted by	MERLIN
Partners	REACT (UN-OCHA), The Red Crescent Society of Tajikistan (RCST), Local Hukumats, Ministry of Health (SES, CDH), Ministry of Emergency Situations (MES), German Agro Action (GAA)
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.untj.org/react/Tajikistan%20factsheets.pdf -

No	103
Country	Bangladesh
Program Name	Bangladesh Urban Disaster Mitigation Project (BUDMP)
Hazard Type	flood
Target Group	municipalities and communities
Major activities for non formal disaster education	
Objectives/activities of the Training/Program (Relevant)	1.Establishment of community based flood mitigation and disaster preparedness system in the Tongi and Gaibandha municipalities. 2.Replication of mitigation measures and disaster preparedness system to other municipal areas of Bangladesh. 3.Improved capacity and skills of community (elected representatives, government officials and key players) to manage the risk and apply mitigation skills in the urban area.
Methods of Education	
Duration	March, 2000
Funding Agency	USAID's Office of Foreign Disaster Assistance
Evaluation System	Not Done / Don't know
Conducted by	CARE Bangladesh/ADPC
Partners	
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	status not known
Website	http://www.adpc.net/AUDMP/Banqla-Overview.html

No	104
Country	Lao PDR
Program Name	Lao PDR Urban Disaster Mitigation Project (LUDMP)
Hazard Type	Multi hazards (<i>Fire and Urban hazards</i>)
Target Group	Communities of Vientiane Municipality areas
Major activities for non formal disaster education	1) capacity building for prevention and response, 2) public awareness campaigns
Objectives/activities of the Training/Program (Relevant)	to reduce the disaster vulnerability of population, infrastructure, and economic assets in Lao urban areas to fires by establishing systems for hazard assessment and disaster mitigation to ensure fire and road safety for the city of Vientiane, and other major cities and communities in Lao PDR.
Methods of Education	public awareness campaigns
Duration	Since 7/1/2002 - unknown
Funding Agency	USAID's Office of Foreign Disaster Assistance
Evaluation System	Not Done / Don't know
Conducted by	ADPC/National Disaster Mitigation Office (NDMO)
Partners	Municipal Disaster Management Committees, Urban Research Institute (URI) and the Fire Department
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	status not known since october 2003 (websites not updated)
Website	http://www.adpc.net/AUDMP/Lao.html

No	105
Country	Philippines
Program Name	Philippines: Cities Disaster Mitigation Project
Hazard Type	Multiple hazards (<i>Floods focus</i>)
Target Group	city officials, urban professionals
Major activities for non formal disaster education	1) training of urban professionals, 2) access to hazard mitigation information and skill, 3) improve capacity to manage risk and apply mitigation skills and technologies
Objectives/activities of the Training/Program (Relevant)	Improved capacity of city officials to manage risk and apply mitigation skills and technologies, Improved access to hazard mitigation information and skills (e.g. techniques, methodologies, and experince) throughout the country, Improved policy environment for disaster mitigation
Methods of Education	training, capacity building
Duration	Since 1/1/1997 - unknown
Funding Agency	USAID's Office of Foreign Disaster Assistance
Evaluation System	Not Done / Don't know
Conducted by	ADPC/AUDMP
Partners	/League of Cities of the Philippines(LCP) / Philippine Business for Social Progress (PBSP)
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	status not known since march 2003 (websites not updated)
Website	http://www.adpc.net/AUDMP/phi-overview.html

No	106
Country	India
Program Name	India: Technological Hazard Mitigation in Baroda and Metropolitan Calcutta
Hazard Type	Multi hazards (<i>Technological/industrial hazards</i>)
Target Group	urban decision-makers and urban managers
Major activities for non formal disaster education	1)capacity building 2)hazard mapping & vulnerability assessment
Objectives/activities of the Training/Program (Relevant)	To build the capacity of urban decision-makers and urban managers in India to identify technological hazards, To establish sustainable public and private sector mechanisms for technological disaster mitigation, To promote replication and adoption of activities involving successful mitigation measures in other municipalities in India.
Methods of Education	capacity building, demonstration activities
Duration	Since Oct 1997 - unknown
Funding Agency	USAID's Office of Foreign Disaster Assistance
Evaluation System	Done
Conducted by	ADPC/AUDMP
Partners	Baroda Citizens Council (BCC), assisted by Urban Studies Center, Times Research Foundation (TRF)
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	status not known since march 2003 (websites not updated)
Website	http://www.adpc.net/AUDMP/india-overview.html

No	107
Country	Sri Lanka
Program Name	Sri Lanka Urban Multi-Hazard Mitigation Project (SLUMDMP)
Hazard Type	Multiple hazards (<i>landslides, flooding, erosion, pollution and contamination of water supplies, subsidence</i>)
Target Group	local authorities
Major activities for non formal disaster education	1) demonstration activities such as hazard and vulnerability mapping, risk analysis, strategic planning, policy and procedural changes, training and professional development, and networking.
Objectives/activities of the Training/Program (Relevant)	To demonstrate a methodology for identifying hazards causing disasters to life and economic assets, assessing the vulnerability, and determining potential losses and damages from a particular hazardous event. To demonstrate a method to select appropriate mitigation strategies to avoid or reduce hazard related losses. To provide local authorities with improved tools and skills for risk management and development planning.
Methods of Education	demonstration activities, training
Duration	Since 15 September, 1997 - unknown
Funding Agency	USAID's Office of Foreign Disaster Assistance
Evaluation System	Done
Conducted by	ADPC/AUDMP
Partners	Centre for Housing Planning and Building (CHPB)
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	status not known (websites not updated since october 2003)
Website	http://www.adpc.net/audmp/sri.html

No	108
Country	Thailand
Program Name	Thailand Urban Disaster Mitigation Project (TUDMP)
Hazard Type	Multi hazard (<i>Floods and Landslides</i>)
Target Group	local government officials and stakeholder
Major activities for non formal disaster education	1. National demonstration projects, 2. The Information and Networking, 3. The Training, Resource Materials, and Continuing Education
Objectives/activities of the Training/Program (Relevant)	to establish appropriate sustainable private and public sector mechanisms for mitigation of disaster vulnerability of urban areas of Thailand and to demonstrate the effectiveness and process of operationalization of the same at city level.
Methods of Education	1. National demonstration projects, 2. The Information and Networking, 3. The Training, Resource Materials, and Continuing Education
Duration	1 October 2002 (Phase 1) and 1 January 2004 (Phase 2)
Funding Agency	USAID's Office of Foreign Disaster Assistance
Evaluation System	Done
Conducted by	ADPC/AUDMP
Partners	
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	http://www.adpc.net/audmp/tudmp/en/overview.html

No	109
Country	Vietnam
Program Name	Disaster Preparedness and Flood Prevention in Quang binh, central Vietnam
Hazard Type	Flood
Target Group	Communities and red cross volunteers (RCV)
Major activities for non formal disaster education	1) Training to communities in first aid, rescue and disaster awareness and preparedness, 2) seminar for networking
Objectives/activities of the Training/Program (Relevant)	protecting the people of Quang Binh from typhoon/ floods related disasters, of enhancing the local capacities in the disaster preparedness domain, and of developing a regional exchange of information and experiences in the field.
Methods of Education	training; networking and other activities
Duration	01/11/98 – 31/10/99.
Funding Agency	DIPECHO, ECU 310,000
Evaluation System	Done
Conducted by	ADPC/PDR-SEA (Partnerships for Disaster Reduction - South East Asia)
Partners	Associazione per la Partecipazione allo Nationalilty: Italy Sviluppo (APS)
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	project completed
Website	http://www.adpc.net/pdr-sea/faproject1.htm

No	110
Country	Laos
Program Name	Disaster Preparedness and Mitigation
Hazard Type	Multi hazard (<i>Flood & Drought</i>)
Target Group	communities, government agencies
Major activities for non formal disaster education	1) Training
Objectives/activities of the Training/Program (Relevant)	1. To increase household capacity and capability to engage in non-flood prone crop, predominantly rice cultivation to mitigate the effects of natural disasters: training; providing seeds, tools, capital including 20 small scale irrigation pumps for 20 villages; 2. To strengthen district and provincial flood damage assessment, analysis and reporting capacity for forwarding to the National Disaster Management Office (NDMO) to expedite disaster response (data collection, GIS, and mapping system); and 3. To strengthen national and local level coordination (NDMO, Department of Agriculture).
Methods of Education	training
Duration	01/12/98 – 31/11/99
Funding Agency	DIPECHO - EURO 140,000
Evaluation System	Done
Conducted by	ADPC/PDR-SEA (<i>Partnerships for Disaster Reduction - South East Asia</i>)
Partners	CARE Internationale (France)
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	project completed
Website	http://www.adpc.net/pdr-sea/faproject1.htm

No	111
Country	Cambodia
Program Name	Disaster Preparedness to Flood in Kampong Cham Province
Hazard Type	Flood
Target Group	red cross volunteers and communities
Major activities for non formal disaster education	1) Training to RCV who then train communities, 2) training syllabus and materials
Objectives/activities of the Training/Program (Relevant)	to create a rescue and assistance plan for flood victims of extreme flooding of the Mekong in Kampong Cham. to strengthen the capacity of both the flood effected populations and the Province's Red Cross (PRC) to prepare and respond to disasters resulting from extreme flood events
Methods of Education	training;
Duration	01/09/1998 – 31/08/1999
Funding Agency	DIPECHO ECU 200,000
Evaluation System	Done
Conducted by	ADPC/PDR-SEA (Partnerships for Disaster Reduction - South East Asia)
Partners	Action Against Hunger (AAH)
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	project completed
Website	http://www.adpc.net/pdr-sea/faproject1.htm

No	112
Country	Philippines
Program Name	Disaster Preparedness in Quezon province
Hazard Type	Multi hazard
Target Group	communities, municipa disaster committee, NGOs, government engineers, architect and planners, schools
Major activities for non formal disaster education	1) training, orientation in Disaster Management, Disaster Preparedness, Emergency Response, and Debriefing, 2) community training campaigns 4) posters, primers, manuals 5) Disaster management course
Objectives/activities of the Training/Program (Relevant)	to enhance the capabilities of various disaster management actors in Queson from the provincial to community levels, to increase coordination between NGO and government, and to reduce vulnerability to natural hazards.
Methods of Education	training;;publications;disaster management course
Duration	01/11/98 – 31/08/99
Funding Agency	DIPECHO, ECU 170,000
Evaluation System	Done
Conducted by	ADPC/PDR-SEA
Partners	Action d'Urgence Internationale (AUI)
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	project completed
Website	http://www.adpc.net/pdr-sea/faproject1.htm

No	113
Country	Mongolia
Program Name	Integrated Fire Management
Hazard Type	Fire
Target Group	communities, school childrens, Information Training Center (ITC) "extension" officers, educators, protected area rangers, key community persons
Major activities for non formal disaster education	1) educating, 2)training fire management units, 3)PRA tools, 4)curricula in school, 5) fire prevention videos, 6) hand book, 7)mascot, 8)fire management plan 9)Fire fighting & ICS course
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	training;publications;mascot;curricula;course
Duration	1998 - 2001
Funding Agency	GTZ
Evaluation System	Not Done / Don't know
Conducted by	GTZ
Partners	Mongolian governments
Disaster education component (independent OR part of the program)	Independent
Regular OR project based activities	project based
Others/Characteristics/Remarks	entails the application of the art and science of modern wildland fire technologies and practices to the local fire problem – i.e. the community level.
Website	http://www.fire.uni-freiburg.de/iffn/country/mn/mn_9.htm

No	114
Country	Japan
Program Name	Asian Youth Forum for Disaster Education (AYF)
Hazard Type	Multi hazard
Target Group	school childrens, teachers, government officials, ngo workers
Major activities for non formal disaster education	1) lectures by disaster experts, 2)educational workshops, 3)emergency drills, 4) field trips, 5)seminar
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	workshop, drills, lectures; field trips;seminars
Duration	30 October - 3 November 2006
Funding Agency	
Evaluation System	Not Done / Don't know
Conducted by	The Asia/Pacific Cultural Centre for UNESCO (ACCU)
Partners	Wakayama Prefectural Board of Education, Inamura no Hi Council and the AYF Organizing Committee
Disaster education component (independent OR part of the program)	Independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.accu.or.jp/esd/ayf/index.html

No	115
Country	India
Program Name	Strategic Framework for Disaster Risk Management and Capacity Building after the Gujarat Earthquake
Hazard Type	Multi hazard (<i>earthquake, cyclones</i>)
Target Group	government officials at local, state and central level, communities, national organisations
Major activities for non formal disaster education	1) workshops, 2) Trainings 3) development of guidelines, 4) awareness campaigns, 5) community preparedness plans, 6) user friendly community awareness and training materials
Objectives/activities of the Training/Program (Relevant)	to is to reduce the disaster risks faced by the vulnerable populations, primarily in the State of Gujarat, and secondly in the States identified as the most disaster-prone in Indiaby improving risk management, disaster preparedness and emergency response capacities at the state and central levels in the country.
Methods of Education	training;awareness raising;preparedness plans;publications
Duration	01.04.01- 31.03.03 (<i>after Gujarat Earthquake</i>)
Funding Agency	UNDP - US\$1,000,000
Evaluation System	Not Done / Don't know
Conducted by	National Crisis Management Committee (NCMC) and State of Gujarat's Emergency Management Commission1
Partners	
Disaster education component (independent OR part of the program)	part of the larger program
Regular OR project based activities	project based
Others/Characteristics/Remarks	adapted from project document, proposed but results not known
Website	http://www.undp.org/bcpr/disred/documents/regions/asia/india_dis_mgmt_prodocfoustates.pdf

No	116
Country	Tajikistan
Program Name	Disaster risk management project - Tajikistan
Hazard Type	Multi hazard
Target Group	Ministry of Emergency Situations (MES), Governments officials, other Communities
Major activities for non formal disaster education	1)increase public awareness, 2)training to MES officials, 3) strengthen MES 4)community-based hazard mitigation and awareness projects
Objectives/activities of the Training/Program (Relevant)	To reduce the loss of lives, the socio-economic setbacks and the environmental damage caused by natural hazards in Tajikistan.
Methods of Education	public awarenss;training;hazard mitigation projects
Duration	1/01/2004 - 31/12/2006
Funding Agency	UNDP 1,693,000 US\$
Evaluation System	Not Done / Don't know
Conducted by	UNDP
Partners	Ministry of Emergency Situations (MES)
Disaster education component (independent OR part of the program)	part of the larger program
Regular OR project based activities	project based
Others/Characteristics/Remarks	The project will increase public awareness to understand risk, vulnerability and disaster reduction, to enhance commitment from public authorities to implement disaster reduction policies and stimulate interdisciplinary and inter-sectorial partnerships, locally, nationally and regionally.
Website	http://www.undp.org/bcpr/documents/dru/proj_fact/FactsheetTajikistanDRM_final.pdf

No	117
Country	Pakistan
Program Name	Technical and Training Support to ERRA for Earthquake Resistant Shelter Reconstruction
Hazard Type	Earthquake
Target Group	local authorities, NGOs, military, artisans and communities
Major activities for non formal disaster education	1)guidelines and training materials, 2) training, 3)public awareness campaign
Objectives/activities of the Training/Program (Relevant)	1) establishing 6 Housing Reconstruction Centres (HRCs) in the most heavily affected Districts responsible for helping ensure earthquake resistant construction techniques are incorporated in the rebuilt homes; (2) the preparation of corresponding detailed guidelines and training materials; (3) carrying out training targeting different stakeholders including local authorities, NGOs, military, and artisans; (4) the establishment of mobile teams responsible for damage assessment, delivering training in the field and monitoring compliance with agreed guidelines; (5) establishing a formal shelter certification system; (6) designing and implementing a public awareness campaign.
Methods of Education	trainings;publications;public awareness
Duration	
Funding Agency	CIDA, USAID
Evaluation System	Not Done / Don't know
Conducted by	UN-HABITAT
Partners	Earthquake Reconstruction and Rehabilitation Authority (ERRA), National NGOs
Disaster education component (independent OR part of the program)	part of the larger program
Regular OR project based activities	project based
Others/Characteristics/Remarks	status not known
Website	http://www.fukuoka.unhabitat.org/project/project.php?sn=89&la=1

No	118
Country	Japan
Program Name	Regional Workshop – Total Disaster Risk
Hazard Type	multi hazard
Target Group	Disaster Management Experts of ASEAN, non-ASEAN countries, Resource individuals from overseas, UN departments and delegates from various countries, cabinet office of Japan and various operational level people
Major activities for non formal disaster education	workshops
Objectives/activities of the Training/Program (Relevant)	· to improve the awareness of disaster reduction individuals of national governments of Asian countries by presenting case reports of successful implementation of Total Disaster Risk Management (TDRM), including: · To strengthen the awareness and importance of the TDRM · To discuss "how to implement TDRM in each stage such as disaster prevention, reduction, preparation and response using case reports of successful implementation as examples. · To clearly define TDRM that is particularly important in the Asian region.
Methods of Education	workshops (same as major methods)
Duration	August 7 (Wed.) – 9 (Fri.), 2002
Funding Agency	Cabinet Office, ASEAN Foundation and Nakauchi Tsutomu Foundation
Evaluation System	
Conducted by	ADRC and OCHA
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/publications/annual/02/02eng/Chapter2-2_E.pdf

No	119
Country	Philippines
Program Name	"Mainstreaming Disaster Risk Reduction in metropolitan
Hazard Type	multi hazards - in megacities
Target Group	directors, chiefs, and senior staff members of the various departments and divisions of MMDA) Metro Manila Development Authority
Major activities for non formal disaster education	workshops with lectures
Objectives/activities of the Training/Program (Relevant)	to address the increasing disaster risk to megacities and complex urban areas such as Metro Manila.
Methods of Education	(same as major methods)
Duration	1-Dec-05
Funding Agency	
Evaluation System	
Conducted by	Metro Manila Development Authority (MMDA), EMI 3cd Program
Partners	University of the Philippines, and EMI's 3cd Program Team
Disaster education component (independent OR part of the program)	
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://emi.pdc.org/DRMlibrary/WSN/wsn-Land-use-planning-wks.pdf

No	120
Country	Philippines
Program Name	Land Use and Urban Planning Tools for Disaster
Hazard Type	multi hazards - in megacities
Target Group	local governments, land use and urban planners
Major activities for non formal disaster education	workshops
Objectives/activities of the Training/Program (Relevant)	to raise the level of understanding and appreciation of disaster risk management of land use and urban planning officers of the member local government units (LGUs) of Metro Manila.
Methods of Education	(same as major methods)
Duration	5-Dec-05
Funding Agency	
Evaluation System	
Conducted by	EMI 3 cd program
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://emi.pdc.org/DRMlibrary/WSN/wsn-Land-use-planning-wks.pdf

No	121
Country	Vietnam
Program Name	Flood Management Training in Vietnam
Hazard Type	flood
Target Group	Vietnam Government and Vietnamese public research institutes, and two individuals each from neighboring Thailand, Cambodia, and Laos.
Major activities for non formal disaster education	seminar
Objectives/activities of the Training/Program (Relevant)	alleviating damages from flood and typhoon disasters,
Methods of Education	(same as major methods)
Duration	November 17th to 20th , 2003
Funding Agency	UNDP, OCHA Kobe, Ministry of Agriculture and Rural Development of Vietnam
Evaluation System	
Conducted by	ADRC (Asian Disaster Reducation Centre)
Partners	ADRC, and UN OCHA Kobe
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://web.adrc.or.jp/publications/annual/03/03eng/pdf/4-2-4.pdf

No	122
Country	Turkey
Program Name	JICA Training in Turkey (local module)
Hazard Type	multi hazard (after 1999 Marmara Earthquake,)
Target Group	local disaster managers, vice governors and county mayors
Major activities for non formal disaster education	seminar; lectures, simulations and local visits
Objectives/activities of the Training/Program (Relevant)	to grasp the current state of Turkey's disaster reduction policy through investigative hearings at the country's disaster reduction authorities, and to enrich the contents of the programs of the local module of the seminar by introducing successful cases of Japan's disaster prevention measures
Methods of Education	(same as major methods)
Duration	June 16 – 26, 2003, First round: Sep. 29 – Oct. 3, 2003 Second round: Oct. 6 – Oct. 10, 2003 Third round: Mar. 8 – Mar. 12, 2004 Fourth round: Mar. 15 – Mar. 19, 2004
Funding Agency	JICA and Ministry of Internal Affairs of Turkey
Evaluation System	
Conducted by	JICA and Ministry of Internal Affairs of Turkey and ADRC
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/publications/annual/03/03eng/pdf/5-1-2.pdf

No	123
Country	Japan
Program Name	Disaster Mitigation, Preparedness and Restoration for Infrastructure (for Civil Engineers)
Hazard Type	multi hazard
Target Group	civil engineers only
Major activities for non formal disaster education	training
Objectives/activities of the Training/Program (Relevant)	participants are expected to acquire the capability to formulate and execute appropriate mitigation, preparedness and restoration measures.
Methods of Education	(same as major methods)
Duration	May 15, 2006 ~ July 29, 2006
Funding Agency	JICA
Evaluation System	
Conducted by	Japan Construction Training Center (JCTC)
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.jica.go.jp/branch/osic/english/training/pdf/group05.pdf

No	124
Country	Japan
Program Name	Training Course On International Emergency Management
Hazard Type	multi hazard
Target Group	medical persons
Major activities for non formal disaster education	training and international study tours
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	(same as major methods)
Duration	
Funding Agency	
Evaluation System	
Conducted by	Japan International Corporation of Welfare Services (JICWELS), World Health Organization (WHO)
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://pdm.medicine.wisc.edu/shinichi.htm

No	125
Country	Japan
Program Name	JICA Seminar on Disaster Management
Hazard Type	multi hazard
Target Group	operational level people (international trainees)
Major activities for non formal disaster education	seminar with lectures, discussions and tours
Objectives/activities of the Training/Program (Relevant)	to reduce the actual impacts of natural disasters by betterment of each country's disaster management
Methods of Education	(same as major methods)
Duration	
Funding Agency	JICA
Evaluation System	
Conducted by	ADRC
Partners	Japanese Government, Hyogo Prefecture, Kagoshima Prefecture, Kyoto Prefecture, City of Kobe, City of Kyoto, United Nations Office for the Coordination of Humanitarian Affairs and various other organizations
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	regular
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo019.pdf

No	126
Country	Japan
Program Name	Regional Workshop on Networking and Collaboration among Non-Governmental Organizations of Asian Countries in Disaster Reduction and Response
Hazard Type	multi hazard
Target Group	NGO representatives
Major activities for non formal disaster education	workshop
Objectives/activities of the Training/Program (Relevant)	Increasing capacity building of NGOs and networking with relevant organizations
Methods of Education	(same as major methods)
Duration	February 20th to 22nd 2001
Funding Agency	
Evaluation System	
Conducted by	ADRC (Asian Disaster Reduction Centre)
Partners	UN OCHA Kobe and Hyogo Prefectural Government,
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo042.pdf

No	127
Country	Japan
Program Name	JICA-ADRC Seminar on Disaster Management
Hazard Type	multi hazard
Target Group	government officials (international trainees)
Major activities for non formal disaster education	seminar, tours focus on disaster education and relationship on disaster and development
Objectives/activities of the Training/Program (Relevant)	to contribute for both their capacity building and personnel development of disaster management.
Methods of Education	(same as major methods)
Duration	21 January to 22 February, 2002
Funding Agency	JICA
Evaluation System	
Conducted by	ADRC (Asian Disaster Reduction Centre)
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based (yearly)
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo043.pdf

No	128
Country	Kazakastan
Program Name	The first Int'l Exhibition in Kazakhstan (Prevention, Rescue, Aid - EURASIA – 2002)
Hazard Type	multi hazard
Target Group	open to all (DM experts, citizens, students - interested people)
Major activities for non formal disaster education	exhibition
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	(same as major methods)
Duration	27 February to 2 March, 2002
Funding Agency	
Evaluation System	
Conducted by	Emergency Agency of Republic of Kazakhstan and EMERCOM of Russia
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo043.pdf

No	129
Country	Japan
Program Name	The 6th Earthquake Tech. Expo in Japan
Hazard Type	earthquake
Target Group	open to all
Major activities for non formal disaster education	exhibition
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	(same as major methods)
Duration	14 and 15 February 2002
Funding Agency	
Evaluation System	
Conducted by	
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	7000 people visited the exhibition
Website	http://www.adrc.or.jp/highlights/NewsNo043.pdf

No	130
Country	Japan
Program Name	JICA- ADRC Seminar on Disaster Management JFY2002
Hazard Type	multi hazard
Target Group	operation level people (international trainees)
Major activities for non formal disaster education	Seminar, field visits
Objectives/activities of the Training/Program (Relevant)	to improve the disaster management capabilities of the participants' countries by providing detailed information on Japanese disaster management.
Methods of Education	(same as major methods)
Duration	19th of January to the 1st of March 2003
Funding Agency	JICA
Evaluation System	
Conducted by	ADRC (Asian Disaster Reducation Centre)
Partners	Subjects of the course includes (1) Basic concepts of disaster management (2) Disaster management of the Japanese central government (3) Disaster management of the Japanese local government (4) Role of private sector and mass media (5) International disaster management cooperation
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based (yearly)
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo066.pdf

No	131
Country	Japan
Program Name	International Urban Search & Rescue Course
Hazard Type	multi hazard (urban)
Target Group	operation level people (international trainees)
Major activities for non formal disaster education	training that includes lectures and practical exercises
Objectives/activities of the Training/Program (Relevant)	to learn tactics and techniques used in urban search and rescue (USAR) situations.
Methods of Education	(same as major methods)
Duration	January 12th to 23rd, 2004,
Funding Agency	
Evaluation System	
Conducted by	ADRC and Singapore Civil Defense Force (SCDF)
Partners	training includes practicals such as shoring methods, debris tunneling, search procedures with breathing apparatus, and collapsed building rescue
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo092.pdf

No	132
Country	Japan
Program Name	JICA Seminar on Disaster Management JFY 2003
Hazard Type	multi hazards
Target Group	operation level people (international trainees)
Major activities for non formal disaster education	seminar, field visits
Objectives/activities of the Training/Program (Relevant)	to improve the disaster management capabilities of the participants' countries by providing detailed information on Japanese disaster management.
Methods of Education	(same as major methods)
Duration	18th January to 29th February 2004
Funding Agency	JICA
Evaluation System	
Conducted by	ADRC (Asian Disaster Reduction Centre)
Partners	Subjects of the course includes (1) Basic concepts of disaster management (2) Disaster management of the Japanese central government (3) Disaster management of the Japanese local government (4) Role of private sector and mass media (5) International disaster management cooperation (6) International Cooperation for Disaster Reduction, and (7) Thematic Disaster Management
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based (yearly)
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo092.pdf

No	133
Country	Tajikstan
Program Name	National Workshop on Disaster Risk
Hazard Type	multi hazard
Target Group	MoES, other ministries involved in disaster management, scientific community and NGOs as well as international organizations
Major activities for non formal disaster education	workshops including site visits
Objectives/activities of the Training/Program (Relevant)	to contribute to sustainable development through promoting a holistic, comprehensive and integrated approach to disaster risk reduction, specifically, the Total Disaster Risk Management (TDRM) approach,
Methods of Education	(same as major methods)
Duration	2 to 6 August 2004
Funding Agency	
Evaluation System	
Conducted by	ADRC, Ministry of Emergency, Situations and Civil Defence (MoES)
Partners	United Nations Disaster Risk Management Project, Swiss Agency for Development and Cooperation, United Nations Development Programme/Bureau for Crisis, Prevention and Recovery and the United Nations Inter-Agency Secretariat of the International Strategy for Disaster Reduction.
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo102.pdf

No	134
Country	Japan
Program Name	JICA Seminar on Disaster Management
Hazard Type	multi hazard
Target Group	operation level people (international trainees)
Major activities for non formal disaster education	Seminar, field visits
Objectives/activities of the Training/Program (Relevant)	to improve the disaster management capabilities of the participants' countries by providing detailed information on Japanese disaster management.
Methods of Education	(same as major methods)
Duration	13 January to 18 February 2005
Funding Agency	JICA
Evaluation System	
Conducted by	ADRC (Asian Disaster Reduction Centre)
Partners	Subjects of the course includes (1) Basic concepts of disaster management (2) Disaster management of the Japanese central government (3) Disaster management of the Japanese local government (4) Role of private sector and mass media (5) International disaster management cooperation (6) International Cooperation for Disaster Reduction, and (7) Thematic Disaster Management
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based (yearly)
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo111.pdf

No	135
Country	South Asian countries (<i>Bangladesh, India, Indonesia, Malaysia, Nepal, Philippines, Singapore and Sri Lanka</i>).
Program Name	Publication of Tsunami awareness booklets in 8 countries in Asia
Hazard Type	tsunami
Target Group	school childrens, communities
Major activities for non formal disaster education	publications of "Inamura-no-hi"
Objectives/activities of the Training/Program (Relevant)	awareness on tsunami
Methods of Education	(same as major methods)
Duration	
Funding Agency	
Evaluation System	
Conducted by	ADRC and ADRRN
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo125.pdf

No	136
Country	Japan
Program Name	Turkish Disaster Mitigation Training Course
Hazard Type	earthquake
Target Group	engineers
Major activities for non formal disaster education	training and field visits
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	(same as major methods)
Duration	21 to 26 August 2006
Funding Agency	JICA
Evaluation System	
Conducted by	ADRC (Asian Disaster Reducation Centre)
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo148

No	137
Country	Japan
Program Name	Disaster Management Training Course
Hazard Type	multi hazard
Target Group	local government officials form central asia
Major activities for non formal disaster education	training and field visits including workshops
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	(same as major methods)
Duration	21 August to 15 September 2006.
Funding Agency	JICA
Evaluation System	
Conducted by	ADRC (Asian Disaster Reducation Centre)
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo149

No	138
Country	Japan
Program Name	JICA's Training for Top Officials of Turkish
Hazard Type	multi hazard
Target Group	local government officials from Turkey
Major activities for non formal disaster education	training and field visits
Objectives/activities of the Training/Program (Relevant)	to give participants an opportunity to learn from Japan's disaster management system and related efforts, and to obtain necessary information for their own municipalities
Methods of Education	(same as major methods)
Duration	29 August to 5 September 2006
Funding Agency	JICA
Evaluation System	
Conducted by	ADRC (Asian Disaster Reduction Centre)
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo151

No	139
Country	Japan
Program Name	JICA Seminar on Disaster Management JFY2006"
Hazard Type	multi hazard
Target Group	operation level people (international trainees)
Major activities for non formal disaster education	seminar, field visits
Objectives/activities of the Training/Program (Relevant)	to provide opportunities to learn about disaster management at the community level.
Methods of Education	(same as major methods)
Duration	15 January to 23 February 2007
Funding Agency	JICA
Evaluation System	
Conducted by	ADRC (Asian Disaster Reduction Centre)
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	yearly
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo159

No	140
Country	Papua New Gunea (PNG)
Program Name	Promotion of Tsunami Awareness
Hazard Type	tsunami
Target Group	communities
Major activities for non formal disaster education	Publications of Tsunami awareness pamphlets and formation of national disaster preparedness and awareness committees
Objectives/activities of the Training/Program (Relevant)	awareness on tsunami
Methods of Education	publications(same as major methods)
Duration	1999-2000, (after 1998 PNG, tsunami)
Funding Agency	
Evaluation System	
Conducted by	Government of PNG and ADRC
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo012.pdf

No	141
Country	Japan
Program Name	First - JICA Regional Seminar on Tsunami
Hazard Type	tsunami
Target Group	high level officials (international)
Major activities for non formal disaster education	
Objectives/activities of the Training/Program (Relevant)	aiming to deepen high level officials' understanding on tsunami early warning system
Methods of Education	(same as major methods)
Duration	3/1/2005 (after 2004 Tsunami)
Funding Agency	JICA
Evaluation System	
Conducted by	
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo135.pdf

No	142
Country	Japan
Program Name	Second - JICA Regional Seminar on Tsunami
Hazard Type	tsunami
Target Group	operational managers and directors
Major activities for non formal disaster education	Seminar with lectures
Objectives/activities of the Training/Program (Relevant)	aiming to deepen operational managers and directors understanding on tsunami early warning system
Methods of Education	(same as major methods)
Duration	23 January to 10 February, 2006 (after 2004 Tsunami)
Funding Agency	JICA
Evaluation System	
Conducted by	ADRC
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo135.pdf

No	143
Country	Japan
Program Name	International Urban Search & Rescue Course
Hazard Type	multi hazard (urban)
Target Group	operation level people, experts (international trainees)
Major activities for non formal disaster education	training that includes lectures and physical exercises
Objectives/activities of the Training/Program (Relevant)	to learn tactics and techniques used in urban search and rescue (USAR) situations.
Methods of Education	(same as major methods)
Duration	21 February to 3 March 2006.
Funding Agency	
Evaluation System	
Conducted by	ADRC and Singapore Civil Defense Force (SCDF)
Partners	training includes practicals such as shoring methods, debris tunneling, search procedures with breathing apparatus, and collapsed building rescue
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/highlights/NewsNo139.pdf

No	144
Country	Srilanka
Program Name	COASTAL COMMUNITY RESILIENCE (CCR)
Hazard Type	tsunami
Target Group	operational level people (<i>disaster management coordinators, UN, NGO, INGO representatives, Red cross representatives</i>)
Major activities for non formal disaster education	training including workshop and field visits; training of trainers
Objectives/activities of the Training/Program (Relevant)	to build the participants' capacity to facilitate initiatives that would increase coastal community resilience.
Methods of Education	(same as major methods)
Duration	February 26–March 2, 2007 (<i>after 2004 tsunami</i>)
Funding Agency	USAID,
Evaluation System	
Conducted by	
Partners	Implement Assessment/Action Plan 1) Disaster Management Centre (DMC) (in collaboration with other agencies and NGOs) 2) Sewalanka (includes DMC) 3) Coast Conservation District (includes Department of Land Use Planning and Practical Action) Incorporate CCR into existing assessment tools 4) Sri Lanka Red Cross/American Red Cross (vulnerability index) 5) Munasinghe Institute for Development (MIND) (risk assessment) 6) SCOTIA Sustainable Coastal Tourism (USAID-Louis Berger Group) Capacity Building 7) Sri Lanka Institute for Development Administration (SLIDA) (training) 8) Eastern University (undergraduate disaster management course) 9) IUCN (existing programs)
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	program based
Others/Characteristics/Remarks	under U.S. INDIAN OCEAN TSUNAMI WARNING SYSTEM (IOTWS) PROGRAM
Website	http://www.us-iotws.gov/file_download.php/ITU+Report-Workshop+Sri+Lanka.pdf?URL_ID=1420&filename=11455184721ITU_Report-Workshop_Sri_Lanka.pdf&filetype=application%2Fpdf&filesize=850599&name=ITU+Report-Workshop+Sri+Lanka.pdf&location=user-S/

No	145
Country	Indonesia
Program Name	Rebuilding A Safer Aceh Workshop
Hazard Type	Multi hazard (<i>tsunami and earthquakes</i>)
Target Group	experts and academia, stake holders and communities
Major activities for non formal disaster education	workshops, training masons, demonstrations on shake tables, publications
Objectives/activities of the Training/Program (Relevant)	1. Share LOCAL & REGIONAL knowledge and expertise in disaster risk reduction and response with the Acehnese stakeholders and communities 2. Highlight the need for better understanding on features of 'safe buildings' 3. Internalize the concept of risk/living with risk using the "Shake Table" demonstration 4. Launch and distribute brochures on 'tsunami' to vulnerable communities in Aceh
Methods of Education	
Duration	17th April to 19th April 2005
Funding Agency	
Evaluation System	
Conducted by	Mercy Malaysia, ADRRN
Partners	NSET
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	project based
Others/Characteristics/Remarks	

No	146
Country	Thailand
Program Name	First pilot training course on Disaster and Development
Hazard Type	multihazard
Target Group	WHO/UNDP country senior advisors with a few senior decision-makers,
Major activities for non formal disaster education	lectures, discussions
Objectives/activities of the Training/Program (Relevant)	describing the inter-relationships between disasters and health sectors in the context of sustainable development
Methods of Education	
Duration	1st to 12th of November 2004.
Funding Agency	UNDP and WHO/SEARO
Evaluation System	
Conducted by	ADPC, WHO, UNDP
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.undp.org/bcpr/disred/documents/news/nov04/ddtcbangkok_241104.pdf

No	147
Country	Afganistan
Program Name	Trainings on Disaster Management
Hazard Type	multi hazard
Target Group	senior managers of Afghan Department of Disaster Preparedness
Major activities for non formal disaster education	trainings
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	training
Duration	3 Apr- 5 May 2005
Funding Agency	
Evaluation System	
Conducted by	ADPC
Partners	InWent Germany and United Nations Assistance Mission for Afghanistan
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	training will include Emergency Response Management, Community Based Disaster Risk Management, Earthquake Vulnerability Reduction Course and Flood & Drought Risk Management.
Website	http://www.adpc.net/infores/monthly_report/apr05.html

No	148
Country	Bangladesh
Program Name	Improvement of early warning systems and responses towards total disaster risk management
Hazard Type	multi hazard
Target Group	ministries, local and national governments, NGOs, institutions
Major activities for non formal disaster education	workshop
Objectives/activities of the Training/Program (Relevant)	to improve the capacity in disaster response and in terms of early warning systems
Methods of Education	(same as major methods)
Duration	19-24 Dec 2004
Funding Agency	OCHA Kobe, ADPC
Evaluation System	
Conducted by	Bangladesh government, ADPC and OCHA Kobe
Partners	Bangladesh Public Administration Training Centre and Disaster Management Bureau
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	

No	149
Country	laos
Program Name	Training Workshop on Earlywarning, Public awareness and education against disasters
Hazard Type	multihazard
Target Group	local government editors, journalists
Major activities for non formal disaster education	training
Objectives/activities of the Training/Program (Relevant)	train in order to enhance their knowledge on disaster risks management and reduction with emphasis on the roles of media in awareness and education
Methods of Education	(same as major methods)
Duration	4-7 February 2002
Funding Agency	
Evaluation System	
Conducted by	National Disaster Management Office, Ministry of Labor and Social Welfare
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/publications/TDRM2003June/18.pdf

No	150
Country	Nepal
Program Name	Community Based Disaster Risk Management Project (SAMADHAN)
Hazard Type	multihazard
Target Group	school childrens, teachers and communities
Major activities for non formal disaster education	awareness raising, capacity building
Objectives/activities of the Training/Program (Relevant)	"To increase the awareness and the response capacities of the local communities in Nepal to potential and frequent natural disasters and to reduce the effects of these disasters on the most vulnerable populations."
Methods of Education	(same as major methods)
Duration	15/02/2006-14/05/2007
Funding Agency	European Union, CARE Osterreich and CARE Nederland 347, 408.37 EURO
Evaluation System	
Conducted by	CARE Nepal
Partners	Jagaran Abhiyan Nepal - Sarlahi Local Development Training Centre- Mahottari Samaj Utthan Yuva Kendra- Dhanusha
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.carenepal.org/Care_nepal_Library/our_Projects_current_SAMADHAN.htm

No	151
Country	Thailand
Program Name	USGS Coastal Geology Training:
Hazard Type	tsunami
Target Group	scientists, engineers
Major activities for non formal disaster education	training
Objectives/activities of the Training/Program (Relevant)	to identify and define tsunami hazards
Methods of Education	(same as major methods)
Duration	January 10-12, 2006
Funding Agency	USAID,
Evaluation System	
Conducted by	USGS
Partners	
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	program based
Others/Characteristics/Remarks	Through the US Indian Ocean Tsunami Warning System (IOTWS) Program,
Website	http://www.iotws.org/ev_en.php?ID=1724_201&ID2=DO_TOPIC

No	152
Country	China
Program Name	3rd Training Course of Space Technology and Remote Sensing Applications in Environment Monitoring and Disaster Mitigation
Hazard Type	multi hazard
Target Group	
Major activities for non formal disaster education	training and field visits
Objectives/activities of the Training/Program (Relevant)	remote sensing data processing and applications in the fields of disaster management, environment protection, urban planning, resources investigation etc
Methods of Education	(same as major methods)
Duration	July 11 to August 10, 2003
Funding Agency	self, US \$ 2200
Evaluation System	
Conducted by	China National Space Administration (CNSA), Secretariat of AP-MCSTA, Asia Pacific Space Education Center (PREP.), Harbin Institute of Technology (HIT), Beijing University of Aeronautics and Astronautics (BUAA)
Partners	UN/OOSA and UN/ESCAP
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	regular type
Others/Characteristics/Remarks	
Website	http://www.cnsa.gov.cn/n615709/n620683/index.html

No	153
Country	Afganistan
Program Name	Training and Capacity Building Project (TCBP)
Hazard Type	multi hazard
Target Group	officials and staff of ministries, UN, NGOs
Major activities for non formal disaster education	training, publications, training of trainers
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	(same as major methods)
Duration	
Funding Agency	
Evaluation System	
Conducted by	Asian Disaster Preparedness Centre (ADPC) and the InWEnt - Capacity Building International, Germany.
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	project based
Others/Characteristics/Remarks	all together 19 course will be delivered under this project
Website	http://www.adpc.net/projects/cbdrm_tr.html

No	154
Country	Japan
Program Name	CITYNET, City of Yokohama, and JICA training course
Hazard Type	multi hazard
Target Group	decision makers in local governments (international)
Major activities for non formal disaster education	training that includes, lectures, group discussions, site observations, interatctions, evacuation drills
Objectives/activities of the Training/Program (Relevant)	1)To help improve the capacity of local government officers in developing countries to deal with disasters 2)To introduce practical lessons and experiences from Japanese cities, mainly the City of Yokohama etc.
Methods of Education	(same as major methods)
Duration	19 October to 8 November 2003
Funding Agency	JICA
Evaluation System	
Conducted by	CITYNET, City of Yokohama, and JICA
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	program based
Others/Characteristics/Remarks	
Website	http://www.citynet-ap.org/en/What's%20New/Disaster_proceedings.pdf

No	155
Country	Turkey
Program Name	Structural Awareness for Seismic Safety Training Program (SASS)
Hazard Type	Earthquakes
Target Group	homeowners, buyers, renters and sellers as well as constructors, communities
Major activities for non formal disaster education	trainings, publications
Objectives/activities of the Training/Program (Relevant)	<ul style="list-style-type: none"> • To raise awareness regarding what makes buildings earthquake resistant. • To show how the actions of building designers, builders, and users can affect earthquake safety. • To encourage everyone to become advocates for better buildings and building maintenance.
Methods of Education	regular type
Duration	
Funding Agency	
Evaluation System	
Conducted by	AHEP training institute
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	regular type
Others/Characteristics/Remarks	4 hour training course regular type
Website	http://www.ahep.org/ev/egitim4_1e.htm

No	156
Country	Turkey
Program Name	Non Structural Mitigation Training Program (NSM)
Hazard Type	Earthquakes
Target Group	communities
Major activities for non formal disaster education	trainings
Objectives/activities of the Training/Program (Relevant)	to increase awareness about non-structural risks, teach people the simple and effective measures to prevent these items from falling and sliding, and to encourage every individual to implement these simple but effective preparedness steps.
Methods of Education	regular type
Duration	
Funding Agency	
Evaluation System	
Conducted by	AHEP training institute
Partners	
Disaster education component (independent OR part of the program)	independent
Regular OR project based activities	regular type
Others/Characteristics/Remarks	1 day training
Website	http://www.ahep.org/ev/egitim3_0e.htm

No	157
Country	Thailand
Program Name	11th Community Based Disaster Management Course (CBDM)
Hazard Type	Multi hazard
Target Group	Local Government Officials, Emergency response agencies and emergency planners. UN agencies and international and local NGOs working in the field of disasters and development. Private sector involved in local level disaster management.
Major activities for non formal disaster education	classroom based trainings including field exercises
Objectives/activities of the Training/Program (Relevant)	The aim of the course is to promote understanding of community based approaches to Disaster Management through sharing of systematized knowledge, information and experience.
Methods of Education	Classroom lecture, field exercises
Duration	Approximately 90 hours - July 21 to August 02, 2003
Funding Agency	Self \$2000
Evaluation System	Not Done / Don't know
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	Independent
Disaster education component (independent OR part of the program)	regular type
Regular OR project based activities	
Others/Characteristics/Remarks	check websites further for Implementer information
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=132&lang=en&Frame=no

No	158
Country	Nepal
Program Name	Basic Level Disaster Management Training
Hazard Type	Multi hazard
Target Group	Volunteers, Teachers and Citizens
Major activities for non formal disaster education	classroom and field exercise
Objectives/activities of the Training/Program (Relevant)	The main purpose of the course is to produce a qualified worker/volunteer who can create awareness to the people & can inform to the people regarding disaster.
Methods of Education	Classroom lecture, field study
Duration	5 days - regular program
Funding Agency	Self NRs.1000.00 per day
Evaluation System	
Conducted by	Nepal Red Cross Society
Partners	Independent
Disaster education component (independent OR part of the program)	regular
Regular OR project based activities	
Others/Characteristics/Remarks	check websites further for Implementer information
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=97&lang=en&Frame=no

No	159
Country	Nepal
Program Name	Community Based Disaster Preparedness (CBDP) Trainer Training
Hazard Type	Multi hazard
Target Group	Community Worker of the concerned community, and relevant Volunteer/Staff of Red Cross
Major activities for non formal disaster education	classroom and field exercise
Objectives/activities of the Training/Program (Relevant)	To increase awareness on preparedness, NRCS provides training to community people/volunteers on CBDP.
Methods of Education	Classroom lecture/practical exercise, field study
Duration	9 days- regular program
Funding Agency	Self NRs.1000.00 per day
Evaluation System	Not Done / Don't know
Conducted by	Nepal Red Cross Society
Partners	Independent
Disaster education component (independent OR part of the program)	regular
Regular OR project based activities	
Others/Characteristics/Remarks	check websites further for Implementer information
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=102&lang=en&Frame=no

No	160
Country	Nepal
Program Name	Community level training of CBDP
Hazard Type	Multi hazard
Target Group	People of the Community, selected by the Community
Major activities for non formal disaster education	classroom and field exercise - 3 days (<i>Disaster Management Training</i>), 3 days (<i>Community Based First-aid</i>), 3 days (<i>Management Training</i>)
Objectives/activities of the Training/Program (Relevant)	Community Based Disaster Prevention (CBDP) to make the community people aware to prevent from the risk situation through gained knowledge and skill on disaster preparedness
Methods of Education	Classroom lecturepractical exercise, field study
Duration	3 days (Disaster Management Training), 3 days (Community Based First-aid), 3 days (Management Training) - regular program
Funding Agency	
Evaluation System	Not Done / Don't know
Conducted by	Nepal Red Cross Society
Partners	Independent
Disaster education component (independent OR part of the program)	regular
Regular OR project based activities	
Others/Characteristics/Remarks	check websites further for Implementer information
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=104&lang=en&Frame=no

No	161
Country	Nepal
Program Name	Women's Involvement in Disaster Management Training
Hazard Type	Multi hazard
Target Group	Volunteers, Teachers, and Citizens
Major activities for non formal disaster education	
Objectives/activities of the Training/Program (Relevant)	to enhance the knowledge and skill regarding disaster management and enable them to conduct basic and advanced disaster management training and workshops. This training also focuses on gender sensitization, equality and equity in Disaster Management.
Methods of Education	Classroom lecturegroup exercise
Duration	
Funding Agency	
Evaluation System	
Conducted by	
Partners	independent
Disaster education component (independent OR part of the program)	
Regular OR project based activities	
Others/Characteristics/Remarks	check websites further for Implementer information
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=99&lang=en&Frame=no

No	162
Country	Philippines
Program Name	Course on Urban Disaster Mitigation (UDM)
Hazard Type	Multi hazard (<i>urban disasters</i>)
Target Group	Administrators and Officials from Provincial and City administrations. Senior and mid level managers of National level Ministries, departments and institutions dealing with Urban Planning, Development, Housing, Infrastructure, and NGOs.
Major activities for non formal disaster education	Classroom based trainings
Objectives/activities of the Training/Program (Relevant)	to provide enhanced understanding of the range of options available to urban authorities in reducing and managing risk from natural and manmade hazards, provide an appreciation of the cost and benefits of various measures and successful approaches to implementation.
Methods of Education	Classroom lecture
Duration	2 weeks - regular program
Funding Agency	self, US \$ 2000
Evaluation System	Not Done / Don't know
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	Independent
Disaster education component (independent OR part of the program)	regular
Regular OR project based activities	
Others/Characteristics/Remarks	check websites further for Implementer information
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=133&lang=en&Frame=no

No	163
Country	Thailand
Program Name	Basic Management for Disaster Managers
Hazard Type	Multi hazard
Target Group	Local government officials, Emergency response agencies, Emergency planners, UN agencies and international and local NGOs, Ngos working in the field of Disasters and Development, Private sector agencies involved in Disaster Management, Donor agencies
Major activities for non formal disaster education	Classroom based
Objectives/activities of the Training/Program (Relevant)	learning opportunities for managers who wish to include knowledge of disaster management in their ongoing professional development.
Methods of Education	Class room lecture
Duration	Regular course
Funding Agency	self, US \$ 1000
Evaluation System	Not Done / Don't know
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	Independent
Disaster education component (independent OR part of the program)	regular
Regular OR project based activities	
Others/Characteristics/Remarks	check websites further for Implementer and other information
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=347&lang=en&Frame=no

No	164
Country	Philippines
Program Name	Course on Urban Flood Risk Mitigation (UFM)
Hazard Type	flood
Target Group	Officials from Provincial and City Administrations, Ministries, departments and institutions dealing with urban planning and development, representatives from cities and towns UN agencies, NGOs & international organisations working on disaster mitigation
Major activities for non formal disaster education	Classroom Training with Field Exercise
Objectives/activities of the Training/Program (Relevant)	to support flood mitigation initiatives in the Asian cities through improving knowledge on the causes of flooding; risk analysis, mapping and flood policy; assessment of flood damages; and providing information on flood mitigation measures and their advantages and disadvantages, raising awareness integrating urban flood mitigation in the urban planning, motivating participants to initiate action for flood risk mitigation and learning from success and failures by systematized sharing of experiences.
Methods of Education	Classroom Training with Field Exercise
Duration	2 weeks- 23 August - 3 September 2004 Naga City, Philippines - regular course
Funding Agency	self, US \$ 2000
Evaluation System	Not Done / Don't know
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	Independent
Disaster education component (independent OR part of the program)	project based
Regular OR project based activities	
Others/Characteristics/Remarks	check websites further for Implementer and other information
Website	http://www.adrc.or.jp/view_training.php?Content=Organization&ID=ADPC&lang=en&Frame=no

No	165
Country	Thailand
Program Name	2nd Course on Hospital Emergency Preparedness and Response (HEPR 2)
Hazard Type	Multi hazard
Target Group	Both administrative and medical health service providers
Major activities for non formal disaster education	Classroom based
Objectives/activities of the Training/Program (Relevant)	nature and type of disasters, disaster risk management, epidemiology and health emergencies, seismic hazards, structural and non-structural components of buildings, functional collapse of hospital, emergency department concepts and operation, emergency medical system (EMS), mass casualty incident and triage, principles of disaster medicine, patterns of injuries, etc.
Methods of Education	Classroom Training
Duration	27 September - 1 October
Funding Agency	
Evaluation System	Not Done / Don't know
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	Independent
Disaster education component (independent OR part of the program)	regular type
Regular OR project based activities	
Others/Characteristics/Remarks	check websites further for Implementer and other information
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=131&lang=en&Frame=no

No	166
Country	Philippines
Program Name	Regional Training Course on Urban Flood Mitigation (UFM)
Hazard Type	flood
Target Group	Administrators and Officials from Provincial and City Administrations, Water engineers and flood control professionals National level ministries, departments and institutions and Private sector organisations
Major activities for non formal disaster education	Classroom Training
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	Classroom Training
Duration	23 Aug. to 3 Sep. at Naga City
Funding Agency	self, US \$ 2000
Evaluation System	Not Done / Don't know
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	Independent, program under AUDMP project
Disaster education component (independent OR part of the program)	program under AUDMP project, project based
Regular OR project based activities	
Others/Characteristics/Remarks	check websites further for Implementer and other information
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=467&lang=en&Frame=no

No	167
Country	Thailand
Program Name	31st Regional Course on Disaster Management
Hazard Type	Multi hazard
Target Group	Officials of national and provincial governments, defense forces, police and emergency services, staff training institutes, institutions of public administration, national and international NGO's, IFRC/ICRC, UN agencies and the private sector.
Major activities for non formal disaster education	Classroom Training
Objectives/activities of the Training/Program (Relevant)	to provide comprehensive disaster management knowledge and skills to enhance the capabilities of executive managers who have key disaster management responsibilities.
Methods of Education	Classroom Training
Duration	8-26 November 2004
Funding Agency	self-US \$ 2500
Evaluation System	Not Done / Don't know
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	Independent
Disaster education component (independent OR part of the program)	regular type
Regular OR project based activities	
Others/Characteristics/Remarks	check websites further for Implementer and other information
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=131&lang=en&Frame=no

No	168
Country	Indonesia
Program Name	4th Regional Course on Earthquake Vulnerability Reduction for Cities (EVRC 4)
Hazard Type	earthquake
Target Group	those concerned with reduction of vulnerability to earthquakes in urban areas
Major activities for non formal disaster education	Classroom and field exercises
Objectives/activities of the Training/Program (Relevant)	to build on past and enduring endeavors such as Earthquakes and Mega cities Initiative (EMI), UN, IDNDR, ISDR initiative for Risk Assessment Tools for Diagnosis of Urban Areas against Seismic Disasters (RADIUS) and Global Earthquake Safety Initiative (GESI) launched by UNCRD and GeoHazard International.
Methods of Education	
Duration	3-9 October 2004
Funding Agency	self,US\$2,000
Evaluation System	Not Done / Don't know
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	independent
Disaster education component (independent OR part of the program)	regular type
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=345&lang=en&Frame=no

No	169
Country	Bangladesh
Program Name	Third Regional Training Course on Earthquake Vulnerability Reduction for Cities
Hazard Type	earthquake
Target Group	those concerned with reduction of vulnerability to earthquakes in urban areas
Major activities for non formal disaster education	Classroom and field exercises
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	
Duration	9-18 June 2003
Funding Agency	self,US\$1,500
Evaluation System	
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	independent
Disaster education component (independent OR part of the program)	regular type
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=449&lang=en&Frame=no

No	170
Country	Thailand
Program Name	Third International Course on Urban Flood Mitigation (UFM-3)
Hazard Type	flood
Target Group	Administrators and officials from provincial and city administrations, development and planning authorities, National level ministries, departments and institutions dealing with urban planning, development, housing, infrastructure, public works, etc.
Major activities for non formal disaster education	Classroom and field exercises
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	Classroom & field Exercises
Duration	3-14 September 2002
Funding Agency	self,US\$2,000
Evaluation System	
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	Independent
Disaster education component (independent OR part of the program)	regular type
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=246&lang=en&Frame=no

No	171
Country	Thailand
Program Name	Sixth Regional Training Course on Flood Disaster Risk Management (FDRM-6)
Hazard Type	flood
Target Group	disaster managers who have responsibilities for dealing with flood hazards
Major activities for non formal disaster education	Classroom & field Exercises
Objectives/activities of the Training/Program (Relevant)	The FDRM-6 has four modules that impart information and skills in flood problem analysis, understanding and appreciation of the various approaches to flood risk reduction, determination of appropriateness of strategies and measures to achieve the desired goal of flood risk reduction
Methods of Education	Classroom & field Exercises
Duration	11-22 October 2004
Funding Agency	self,US\$2,000
Evaluation System	
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	Independent
Disaster education component (independent OR part of the program)	regular type
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=470&lang=en&Frame=no

No	172
Country	Philippines
Program Name	International Disaster Risk Management Course (IDRMC)
Hazard Type	Multi hazard
Target Group	Middle and senior level program managers, technical staff, field officers, researchers, policy analysts, from government, donor agencies, INGOs, NGOs.
Major activities for non formal disaster education	Classroom & field Exercises
Objectives/activities of the Training/Program (Relevant)	to provide a solid foundation in the key principles, concepts and methods of risk and disaster management. While differentiating between various approaches, and integrating a wide-range of cross-cutting issues, it seeks to impart a thorough understanding of the theory, and build solid skills in the practice of risk and disaster management.
Methods of Education	Classroom & field Exercises
Duration	May 6 - 17, 2002 (IDRMC-1) March 3 - 14, 2003 (IDRMC-2)
Funding Agency	
Evaluation System	
Conducted by	
Partners	Independent
Disaster education component (independent OR part of the program)	regular type
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=354&lang=en&Frame=no

No	173
Country	Philippines
Program Name	Local & Community Level Disaster Risk Management (LCLDRM)
Hazard Type	Multi hazard
Target Group	Program Managers, Technical Staffs and Trainers from INGOs and NGOs, Local Government Managers and Officers
Major activities for non formal disaster education	Classroom, field Exercises, study tours
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	Classroom, field Exercises, study tours
Duration	October 14 - 25, 2002 (LCLDRM-5) September 15 - 26, 2003 (LCLDRM-6)
Funding Agency	
Evaluation System	
Conducted by	
Partners	Independent
Disaster education component (independent OR part of the program)	regular type
Regular OR project based activities	
Others/Characteristics/Remarks	upto six programs has been conducted
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=353&lang=en&Frame=no

No	174
Country	Vietnam
Program Name	Training course on Disaster Management
Hazard Type	Multi hazard
Target Group	Local, Provincial and Ministerial Government Officials.
Major activities for non formal disaster education	Classroom & field Exercises
Objectives/activities of the Training/Program (Relevant)	Theory: Disaster Management, Damage Assessment and Needs Analysis. Practice: Exercise and field trip
Methods of Education	Classroom & field Exercises
Duration	3 weeks
Funding Agency	self - USD 15.00
Evaluation System	
Conducted by	Central Committee for Flood and Storm Control (CCFSC)
Partners	Independent
Disaster education component (independent OR part of the program)	regular type
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=120&lang=en&Frame=no

No	175
Country	Thailand
Program Name	Disaster Management Course
Hazard Type	Multi hazard
Target Group	Officials of national and provincial government, defense forces, staff and training institutions, institutions of public administration, national and international NGO's, IFRC/ICRC, UN agencies and the private sector.
Major activities for non formal disaster education	Classroom training
Objectives/activities of the Training/Program (Relevant)	to facilitate, within a development framework, valuable contributions in the important areas of sustainable economic growth, poverty reduction, environmental conservation and overall risk reduction.
Methods of Education	Classroom Training
Duration	3 Weeks, November (Every Year)
Funding Agency	self - US \$ 2500
Evaluation System	
Conducted by	ADPC (Asian Disaster Preparedness Centre)
Partners	Independent
Disaster education component (independent OR part of the program)	regular type
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=128&lang=en&Frame=no

No	176
Country	Sri Lanka
Program Name	Disaster Management
Hazard Type	Multi hazard
Target Group	District & Divisional Administrators, Senior Police Officers
Major activities for non formal disaster education	
Objectives/activities of the Training/Program (Relevant)	Frame work of Disaster in Sri Lanka, Disaster Circle, Response, Relief, Rehabilitation & Mitigation
Methods of Education	Class room based
Duration	10 Days, Twice a Year
Funding Agency	
Evaluation System	
Conducted by	
Partners	
Disaster education component (independent OR part of the program)	
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.adrc.or.jp/view_training.php?Content=Course&ID=174&lang=en&Frame=no

No	177
Country	Thailand
Program Name	Fourth International Course on Community Based Disaster Management
Hazard Type	Multi hazard
Target Group	Local Government officials, Emergency Response Agencies and Emergency Planners, UN Agencies and International & Local NGOs, NGOs working in the field of Disaster and Development, Private Sector involved in Disaster Management, Donor Agencies open to all the countries
Major activities for non formal disaster education	Classroom and field exercises
Objectives/activities of the Training/Program (Relevant)	·To examine different disaster management models and approaches and analyze the validity of community-based approaches in disaster management ·To introduce various participatory tools in community-based risk assessment and practice them in a chosen disaster prone community ·To identify various risk reduction measures that can be undertaken by the community and translate these measures into community level action plan ·To learn lessons by providing an opportunity for sharing experiences
Methods of Education	Class based room
Duration	3-14 July, 2000
Funding Agency	US\$2,000 per participant
Evaluation System	
Conducted by	Asian Disaster Preparedness Center and Duryog Nivaran (South Asia Network)
Partners	Independent
Disaster education component (independent OR part of the program)	regualr type
Regular OR project based activities	
Others/Characteristics/Remarks	
Website	http://www.adpc.net/training/te-CBDM4.html

No	178
Country	Afganistan
Program Name	National Programme for Disaster Prevention - (Emergency Support to the Office of Disaster Preparedness) (Broad Program)
Hazard Type	Multi hazard (<i>Country Specific -earthquake, floods, landslides, epidemics, locust swarms and forest fires</i>)
Target Group	local government officials, teachers, and families
Major activities for non formal disaster education	1)Training of the Office of Disaster preparedness (ODP) personnels, 2)Disaster preparedness education programmes in high-risk regions for local government officials, teachers, and families , 3)Development of a disaster awareness programme
Objectives/activities of the Training/Program (Relevant)	capacity development of ODP,
Methods of Education	training; disaster educational programs;awareness program
Duration	
Funding Agency	UNDP - \$50,000
Evaluation System	Not Done / Don't know
Conducted by	UNDP
Partners	• Office of Disaster Preparedness • Ministry of Rural Development and Rehabilitation • NGOs
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	This program includes 2 projects 1. Emergency Support to the Office of Disaster Preparedness 2. National Area Based Development Programme -Rehabilitation of earthquake-affected houses in Nahrin district of Baghlan Province
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

No	179
Country	Bangladesh
Program Name	Support for Disaster Management (Broad Program)
Hazard Type	Multi hazard (<i>country specific - Tropical cyclones, tidal surges, tornados, floods, droughts and large-scale riverbank erosion</i>)
Target Group	government, key institutions; communities;NGO; private sectors
Major activities for non formal disaster education	1) Training for national and sub-national officials of the government, NGO, and private sector, 2) Community risk reduction programs, 3)advocacy programs
Objectives/activities of the Training/Program (Relevant)	to strengthen the capacity of the Bangladesh disaster management system to reduce unacceptable risks and improve response and recovery activities.
Methods of Education	training;community empowerment;research
Duration	
Funding Agency	UNDP - \$6.34 million. The UK Department for International Development - \$8.10 million
Evaluation System	Not Done / Don't know
Conducted by	UNDP
Partners	• Inter-Ministerial Disaster Management Committee • National Disaster Management Council • Ministry of Disaster Management and Relief, Directorate of Relief and Disaster Management Bureau, Department of Environment, and Bangladesh Fire Service • Disaster Management Committees at the District, Sub-district, and local (Union) level • Research organizations, professional bodies and grassroots NGOs • DFID, EU, UNICEF
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	1. Community risk reduction programmes 2. Training for national and sub-national officials of the government, NGO, and private sector
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

No	180
Country	Cambodia
Program Name	Strengthening National Capacities for Disaster Preparedness and Management (Broad Program)
Hazard Type	Multi hazard, <i>Country Specific - Floods and Drought</i>
Target Group	national and other level committees, cambodian red cross (CRC)
Major activities for non formal disaster education	1) capacity building such as training
Objectives/activities of the Training/Program (Relevant)	1. building the capacity of National Committee for Disaster Management (NCDM) of Cambodia and Cambodian Red Cross.
Methods of Education	capacity building such as training
Duration	since 1997 - unknown (<i>1st Project mentioned at remarks</i>)
Funding Agency	UNDP - \$250,000, Special UNDP - \$30,000, UNICEF \$25,000, and WFP \$45,000 <i>i(for 2 mentioned projects)</i>
Evaluation System	Not Done / Don't know
Conducted by	UNDP
Partners	• UN agencies (WFP, FAO, WHO, UNICEF) • NCDM, • Bretton Woods Institutions and Asian Development Bank, • CRC, • IFRC • NGOs, • Mekong River Commission, • International Institute for Disaster Risk Management, • Asian Disaster Preparedness Center
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	Following are the projects under this program 1. Capacity-Building for Integrated Disaster Management 2. Disaster Management
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

No	181
Country	China
Program Name	Disaster Management Programmes (Broad Program)
Hazard Type	Multi hazard, <i>Country specific (Floods, droughts, earthquakes, blizzards and typhoons)</i>
Target Group	government, local community leaders, rural womens communities, educational institutions, childrens
Major activities for non formal disaster education	1) early warning and emergency response training, 2) awareness raising, 3) capacity building
Objectives/activities of the Training/Program (Relevant)	1. Capacity-building in the areas of early warning, emergency response, training and monitoring of major disasters 2. Raising public awareness. The project has a series of training activities to target local community leaders, educational institutions, and rural women. 3.The Emergency Response Capacity Building at the Community Level project serves to assist in country risk assessment and disaster preparedness for children at the community level.
Methods of Education	training; awareness raising etc;
Duration	
Funding Agency	• UNDP - \$200,000 • \$55,000 from government cost sharing • UN Environment Programme - \$554,000 World Bank \$700,000 • The French Government - 20 million French francs (about \$2.8 million) • UNICEF- \$300,000
Evaluation System	Not Done / Don't know
Conducted by	UNDP
Partners	• UN Disaster Management Team (UNDP, WFP, UNICEF, etc.) • Government of China, National Committee for International Disaster Reduction (consists of 13 ministries and agencies) • Line research institutions • International NGOs and regional agencies • UN International Strategy for Disaster Reduction Secretariat
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	Following are the projects under this program 1. Capacity Development for China Disaster Reduction Actions 2. Flood Control Along the Yangtze River 3. Capacity Development in Flood Disaster Predication and Assessment 4. Disaster Information Management in Beijing and Hubei 5. Emergency Response Capacity-Building at the Community Level
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

No	182
Country	India
Program Name	National Disaster Risk Management Programme – Sudden and Slow Onset Disasters
Hazard Type	Multi hazard (<i>Sudden and Slow onset disasters</i>)
Target Group	Communities, local governments, administrators, womens other agencies
Major activities for non formal disaster education	1) training, 2)awareness generation, 3)assist in developing DM plans and Committees, 4)community based planning, 5) drills, 5) disaster resistant constructions (<i>technology transfer</i>)
Objectives/activities of the Training/Program (Relevant)	1. aims to strengthen disaster preparedness, response, and mitigation plans of communities, local governments, and district administrations in some of the most vulnerable districts of India
Methods of Education	training;drills;technology transfer; DM plans
Duration	2003-2007
Funding Agency	UNDP and others - \$27 million
Evaluation System	Not Done / Don't know
Conducted by	UNDP
Partners	Ministry of Home Affairs • State governments and local governments • National- and state-level training institutions • Other national-level institutions • Various associations • Educational and technical institutions
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	
Website	

No	183
Country	India
Program Name	Orissa Disaster Management Programmes (Broad Program)
Hazard Type	Multi hazards (floods, cyclones and drought)
Target Group	Communities, Orissa emergency volunteer force, disaster management teams at all levels;engineers and masons
Major activities for non formal disaster education	1) training, 2)formation of dm teams, 3) demonstrations of disaster resistant technologies through model community centres, manuals, posters and pamphlets, 4) skill development of engineers and masons
Objectives/activities of the Training/Program (Relevant)	1. Preparation of multi-hazard response plans at village-, panchayat-, block- and district-level, and formation and training of disaster management teams at all levels; 2. Developing skills of engineers and masons in disaster resistant, cost-effective housing technologies; 3. Formation and training of Orissa emergency volunteer force and promotion of volunteer activities 4. demonstrations of disaster resistant technologies through model community centres, manuals, posters and pamphlets
Methods of Education	training; training masons engineers; preparing response plans; form volunteers; demonstartions, posters, pamphlets
Duration	unknown (after the hazardous events)
Funding Agency	• Swiss Development Cooperation: \$694,324 • UK Department for International Development: \$3,732,539 • CARE (Private Sector): \$47,421• Norwegian Government: \$50,000
Evaluation System	Not Done / Don't know
Conducted by	
Partners	Orissa Disaster Mitigation Authority, Government of Orissa • Swiss Development Cooperation • Department of Panchayati Raj, Government of Orissa • Department of Health and Family Welfare, Government of Orissa • Department of Water Resources, Norwegian Government • United Nations Volunteers • DFID • FAO • WHO
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	Projects under this program • Orissa Habitat Development Project • Orissa Floods Livelihood Restoration Following projects falls under this program • Orissa Breach Closure Project • Western Orissa Drought Relief Project • Orissa Disaster Management Project • Strengthening Disaster Management Capacity • Community Shelter • Promotion of Appropriate Housing Technologies and Opportunities for Sustainable Livelihoods in Orissa
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

No	184
Country	India
Program Name	Rajasthan Drought Management Programmes
Hazard Type	Drought
Target Group	Schools and Communities of Rajasthan
Major activities for non formal disaster education	1) awareness through development of awareness materials
Objectives/activities of the Training/Program (Relevant)	1. Production of public-awareness material on water management for dissemination in schools and public buildings 2. Preparation of community-based drought proofing plans for affected communities
Methods of Education	Publica awareness ;publications
Duration	2003-2007
Funding Agency	UNDP contributed \$130,000
Evaluation System	Not Done / Don't know
Conducted by	
Partners	• Health, Environment and Development Consortium • Association for Rural Advancement Through Voluntary Action and Local Involvement
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	Prohjects under this program • Rajasthan Coordination • Drought Mitigation in Rajasthan • Rajasthan Drought Recovery Programme • Disaster Risk Management Programme - Slow Disasters
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

No	185
Country	India
Program Name	National Capacity-Building in Disaster Management
Hazard Type	Multi hazard
Target Group	government officials, state faculties
Major activities for non formal disaster education	1) awareness, 2)training of officials , 3)publications of manuals and guidelines and 5) study tours and skill training
Objectives/activities of the Training/Program (Relevant)	creating awareness about the importance of and the need for disaster preparedness and mitigation measures.
Methods of Education	training;awareness raising; publications;skill training
Duration	since 1996-unknown
Funding Agency	UNDP contributed \$550,000
Evaluation System	Not Done / Don't know
Conducted by	UNDP
Partners	• NCDM • State Institutes of Public Administration • Indian Institute of Management • Administrative Staff College of India • Xavier Labour Research Institute
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	Project under this program, Strengthening National Disaster Management Capacity and(IND/97/001)
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

No	186
Country	Indonesia
Program Name	National Programmes in Disaster Management (Broad Program)
Hazard Type	Multi hazards, - <i>Country Specific (volcanoes, floods, forest fires, drought, tsunamis, earthquakes)</i>
Target Group	government officials and other agency officials
Major activities for non formal disaster education	1) training, 2)introduction of concept on DM as a part of development
Objectives/activities of the Training/Program (Relevant)	capacity-building in disaster management
Methods of Education	training
Duration	project 1, completed in 2001
Funding Agency	UNDP - \$1,063,432 Government of New Zealand - \$101,536
Evaluation System	Done positive impacts from project 1. after evaluation of 2nd project another project started
Conducted by	UNDP
Partners	• Government of Indonesia • Secretariat of the National Coordinating Board for Disaster and IDP Management (Bakornas PBP) • UN Disaster Management Team • Asian Disaster Preparedness Centre, University of Gadjah Mada, Yogyakarta • Embassy of New Zealand
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	Projects under this program 1. Institutional Strengthening of Disaster Management in Indonesia (INS/94/006) 2. Preparatory Assistance for Providing Technical Support in Strengthening the National Capacity in Disaster Management (INS/00/005)
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

No	187
Country	Mongolia
Program Name	• Strengthening the Disaster Mitigation and Management System in Mongolia
Hazard Type	Multi hazards (<i>drought, floods, storms</i>)
Target Group	communities, local agencies
Major activities for non formal disaster education	1) trainings, 2) introduction of new technologies, 3) change in paradigm from military based to civil based disaster management
Objectives/activities of the Training/Program (Relevant)	
Methods of Education	training; technology transfer
Duration	
Funding Agency	UNDP - \$100,000; Government of Luxembourg - \$565,000; DFID - \$107,190
Evaluation System	Not Done / Don't know
Conducted by	UNDP
Partners	• Agencies of the UN Disaster Management Team • National Institute of Meteorology, Hydrology and Environmental Monitoring • State Civil Defence Board • Government of Luxembourg • All line ministries • Local governments
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	Projects under this program • Emergency Assistance to Dzud Areas (MON/00/302) • Disaster Coordination in Mongolia (MON/01/302) • Strengthening the Disaster Mitigation and Management System in Mongolia (MON/02/305)
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

No	188
Country	Nepal
Program Name	Participatory Disaster Management Programme (Broad Program)
Hazard Type	Multi hazard (<i>Country Specific - floods, earthquakes, droughts, landslides, epidemics, Glacial Lake Outburst Floods, fire, and ecological hazards. avalanches, rainstorms, hailstorms, stampedes, and industrial accidents.</i>)
Target Group	communities, government officials
Major activities for non formal disaster education	1) trainings on disaster management to communities and government officials, 2) study tours
Objectives/activities of the Training/Program (Relevant)	(1) enhance the capacity of local communities, particularly women, in disaster management; and (2) lessen the impacts of natural disasters, particularly floods and landslides, on the lives of people by shifting the focus from disaster relief and rescue to disaster preparedness and mitigation.
Methods of Education	training; study tours
Duration	
Funding Agency	• The total NEP/99/014 programme resource for the first year (2001) was \$410,000, and \$200,000 for 2002. • UNDP contributed \$ 100,000 from TRAC 1.1.3 funds for NEP/03/004.
Evaluation System	don't know
Conducted by	UNDP
Partners	• Ministry of Home Affairs • UNDP/Japan Women in Development Fund • UNOPS • The International Centre for Integrated Mountain Development
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	Projects under this program • Participatory Disaster Management Programme (NEP/99/014) • Strengthening Disaster Management Capacity (NEP/03/004)
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

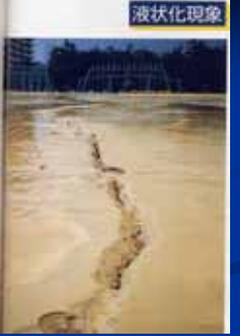
No	189
Country	Philippines
Program Name	Disaster Management Programmes (Braod Program)
Hazard Type	Multi hazard (Country Specific - volcanic eruptions, tropical cyclones, earthquakes, floods, mudflows, fire and drought)
Target Group	communities, local government units and agencies
Major activities for non formal disaster education	1) raising public awareness, 2) development and dissemination of films on media
Objectives/activities of the Training/Program (Relevant)	to increase the capacity of disasterprone communities to anticipate and mitigate large and sudden natural disasters such as heavy rainstorms and earthquakes
Methods of Education	training;public awareness
Duration	
Funding Agency	UNDP, UN- OCHA,
Evaluation System	
Conducted by	UNDP
Partners	• Office of Civil Defence • Philippine Institute of Volcanology and Seismology • PAGASA • Provincial Public Safety and Emergency Management Office, Province of Albay • Department of Environment and Natural Resources • Department of Interior and Local Government • Philippine Information Agency • NGOs Programme Activities
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	Projects under this program • Strengthening Local Government Capacity for Disaster Preparedness and Mitigation (UNDESA INT/95/X51)• Public Awareness and Preparedness (PHI/02/003) • Emergency Grant for the Eruption of the Mayon Volcano, Albay, Philippines (OCHA DPR 310)
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

No	190
Country	Iran
Program Name	National Programme for Disaster Prevention (Broad Program)
Hazard Type	Multi hazards
Target Group	government and communities
Major activities for non formal disaster education	1) enhance public awareness on earthquakes, 2) training of Iran Red Crescent Society (RCS), 3)publication of training materials such as search and rescue
Objectives/activities of the Training/Program (Relevant)	• Capacity-building • Disaster preparedness, mitigation, and response
Methods of Education	public awareness;training;publication of training materials
Duration	
Funding Agency	• IRA/95/003/A/13/99: \$250,000 from UNDP Resources • IRA/00/032: \$150,000 from UNDP
Evaluation System	
Conducted by	UNDP
Partners	• IRA/95/003/A/13/99: Ministry of Interior, Bureau for Research and Coordination of Safety and Rehabilitation Activities • IRA/00/032: RCS and the Ministry of Interior
Disaster education component (independent OR part of the program)	part of the program
Regular OR project based activities	project based
Others/Characteristics/Remarks	Projects under this program • Assistance to the Government in Formulating a National Preparedness and Mitigation Plan for Natural Disasters (IRA/95/003/A/13/99) • Capacity Development for National Disaster Response and Coordination (IRA/00/032)
Website	http://www.undp.org/bcpr/disred/documents/publications/corporatereport/asia.pdf

Source: Websites of the Educational Institutions and other internet-based publicly-available sources.

Appendix 5. Teaching materials developed by the Hyogo Prefectural Board of Education. Japan

<p>Elementary School Grade1-3 (6-9 years old)</p>	<p>“When I was a child, ...”</p>  <p>My house was collapsed by heavy snowfall.</p>	<p>“30 years ago, ...”</p>  <p>Embankment was broken by a flooding due to heavy rain.</p>
	<p>“After an earthquake, ...”</p>  <p>Many people lost their houses and stayed at evacuation shelters.</p>	<p>“Thank You for Your Kind Help.”</p>  <p>Many volunteers helped us.</p>
	<p>“In case of an earthquake, ...”</p>  <p>What should I do until the quake stops?</p>	<p>“In case of an emergency, ...”</p>  <p>What can we prepare for future disasters?</p>

<p>Elementary School Grade 4-6 (10-12 years old)</p>	<h3>Earthquake & Faults</h3>  <p>Explaining about earthquake & faults in Hyogo Prefecture.</p>	<h3>Seismic intensity</h3>  <p>Showing quake intensities with pictures</p>
	<h3>Disasters occurred in my town in the past</h3>  <p>Encouraging to learn from past disasters occurred in your town.</p>	<h3>Discussion at home</h3>  <p>Encouraging to discuss with family.</p>
<p>Junior high school Students (14-16 years old)</p>	<h3>How was the building collapsed?</h3>  <p>X-shaped crack on the wall.</p>	<h3>What happened to the ground on reclaimed lands?</h3>  <p>Liquefaction phenomenon was seen after an earthquake, since water came up from the underground which contains a lot of water.</p>

The ground split!



There were many cracks seen in the ground of affected areas after an earthquake.

How can we make a disaster-resilient community?



We should know about a city planning in our community and discuss how to build a safer community.

What should we do in case of disasters? Let's talk with your family!



What do we need?
Emergency bag, containing drinking waters, torch, radio, etc.

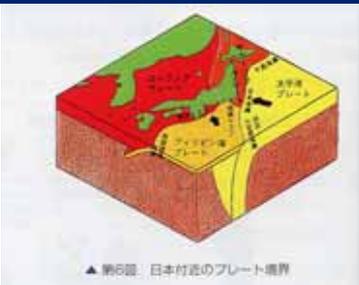
Do you know about first aid?



First aid treatment for bone fracture

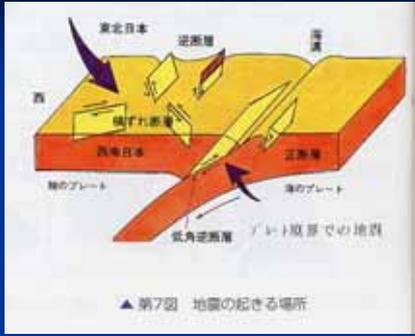
High school Students (16-18 years old)

How is the Japan's geological situation?

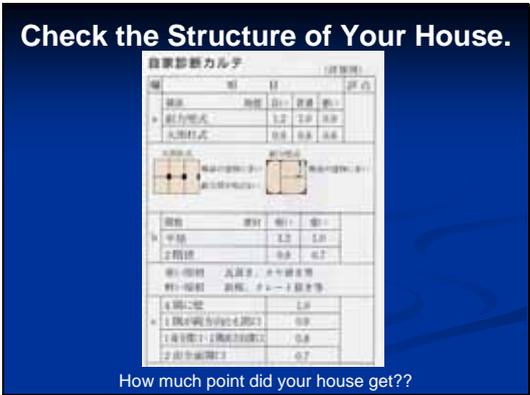
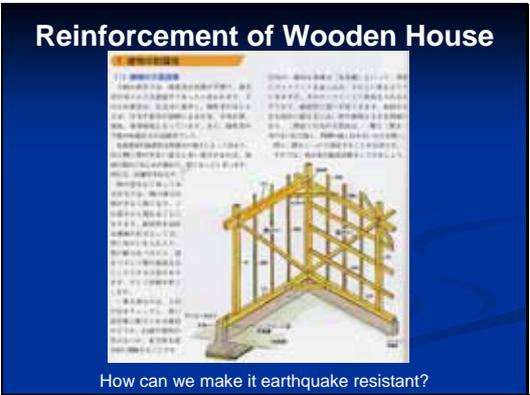


▲ 第6図 日本付近のプレート境界
Japan is on the 4 Plates.

How does Earthquake Occur?



▲ 第7図 地震の起る場所



Reference: the Hyogo Prefectural Board of Education

Appendix 6.

**COMPENDIUM OF WHO WHAT WHERE
RECENT EFFORTS IN SCHOOL SAFETY AND DISASTER RISK REDUCTION EDUCATION
2005 - 2007
(documented as of June 30th, 2007)**

This information was compiled by Risk RED, based on correspondence from contributors to the UNISDR Knowledge and Education Platform. This compendium is by no means complete. The recently launched Disaster Risk Reduction Education Network listserv (ENDRR-L) archives contain additional references to initiatives all over the world. The listserv is open to anyone interested in disaster risk reduction education. To subscribe to the listserv, or to view the archives, please go to: <http://groups.preventionweb.net/scripts/wa-PREVENTIONWEB.exe?A0=ENDRR-L>. Risk RED will be working to make this compendium available for collective mainenance online. In the meantime, to share any additions or corrections please send an email to: ENDRR-L@GROUPS.PREVENTIONWEB.NET

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Country	Year Initiated	School Structural Safety	School Disaster Risk Management	Hazards Education in K-12 Schools	Disaster Risk Reduction & Prep Ed. in School	Teacher Training	Disaster Risk Reduction Education in Communities	Special and other	Description	Contacts
Algeria	2005				X				One lesson per year in primary school. Materials from ARCS. Discussion to broaden in official school curriculum	Algeria Red Crescent Society
Algeria	2005			X					One lesson per year in secondary school	Djillali Benouar, benouar@ictp.it
Algeria	2005	X							Boumerdes school reconstruction and prioritization for wider retrofit	Djillali Benouar, benouar@ictp.it
Argentina	2005			X					ABC Desastre	Wisner, 2006
Australia	200?		X	X					Comprehensive resources for DRM education in Schools. www.ema.gov.au/schools	
Bangladesh	2005			X						Wisner, 2006 BDPC, saidur@banqla.net

Bangladesh	2007				X				Disaster Management Bureau introducing DM and awareness programmes to primary and secondary school curricula. EU supported Primary School Cyclone Shelter Programme	BDPC, saidur@bangla.net National Platforms Progress & Shashanka, Action Aid shashankas@gmail.com
Belize	2007						X			IFRC
Bolivia	2005			X						Wisner, 2006
Br. Virgin Islands	2005			X						Wisner, 2006
Cambodia	2007		X						School Safety Project (RCC MDRD mainstreaming)	ADPC, sanjayab@adpc.net
Canada		X							British Columbia, school retrofit program	Tracy Monk, 2005
China	2005			X	X				Hazards and Mitigation Text to every senior middle school student	Wisner, 2006
Colombia	2001 -			X					Bogotá's Education Committee trains teachers to include basic disaster awareness	Wisner, 2006
Colombia	2007	X							Bogota selected and prioritized for seismic retrofit and rehab of 300 of 800 public schools (2400 buildings) (WB credit \$80 million USD)	Omar Cardona, 2007
Colombia	2007				X					IFRC,
Costa Rica	2003			X					Environment culture for sustainable development" trained 120 cadres & 6,000 teachers. Participatory hazard-mapping, narrative experience, debates, brainstorm, games, songs and multimedia.	Wisner, 2006
Costa Rica	2007						X			IFRC
Cuba	2005			X	X	X			Hemispheric leader in teaching preparedness, prevention and response including drills	Wisner, 2006
Czech Rep	2005			X						Wisner, 2006
Dominican Republic	2005			X						Wisner, 2006
Dominican Republic	2007						X			IFRC
Ecuador	2005			X					Healthy Schools programme includes seismic and volcanic risk	Wisner, 2006

El Salvador	2005			X						Wisner, 2006
Fiji	2007-	X		X	X	X			Standardizing structural design and retrofit of schools with national committee responsible to NDM Council. Assessment methodology & pilot assessment of schools. 44 million F\$ to retrofit 36 schools with support from EU. Task force with Dept of curriculum established for drr integration. UNCRD project.	Joeli Rokovad jrokovada@govnet.gov.fj Sowane Puamau, puamaufesp@connect.com.fj Robert Pol., Institute of Engineers. ianmacallan@connect.com.fj
France	2005			X					http://eedd.scola.ac-paris.fr/crisques2.htm SESAM web-site	Wisner, 2006 chantal.tissier@wanadoo.fr
France					X				www.prevention2000.org/ www.fecrim.org Memo'Risks simulation game http://www.prevention2000.org/memorisks/	Oliver Schick olivier.schick@numerical.fr
Germany	2004			X						Wisner, 2006
Ghana	2007						X			
Greece	2005			X						Wisner, 2006
Guatemala	2007			X	X	X				CONRED
Hungary	2005			X						Wisner, 2006
Hungary	2007						X			IFRC
India	2007-2008					X			Developing resource kit and activities for teachers	Gol, UNDP DRMP Balaka Dey
India	2007		X					X	Non-structural Risk Reduction Handbook for Schools	GoD, GHI, SEEDS,
India	2007				X					Action Aid
India	2007				X				Publication of "Health, Well Being and Safety of School Children" module	National Council for Education and Training
India	2007?				X		X		IEC Materials for awareness in schools and rural communities	Gol, UNDPDRMP Balaka Dey www.undp.org.in/dmweb
India	2006				X				DM in school curricula	14 of 29 State Education Boards have DRM curricula in regional languages

India	2005				X				DM in the school curriculum for grade VIII, IX and X. http://www.cbse.nic.in/	Central Board of Secondary Education
India	2005 -2007		X		X				Initiated School DM plans in all schools. (as of 2005, 500 in Delhi). Templates developed, school plans and colouring activity book . www.undp.org.in/dmweb	Gol, UNDP DRMP Balaka Dey
India - Gujarat	2005 -2007		X	X	X	X			Gujarat School Earthquake Safety Initiative. 150 schools in 3 cities.	GSDMA, SEEDS, Manu Gupta manu@seedsindia.org
India - Delhi	2006	X							Retrofit planning for 1 model RCC school in New Delhi	GoD, GHI, Hari Kumar hari@geohaz.org
India - Uttar Pradesh	2000 - ?	X							Uttar Pradesh more than 6,000 seismically-safe schools were built	Sanjay Bhatia sanjayab2002@yahoo.co.in
India - Himachal Pradesh	2006 -	X							Govt. requests model for school assessment, analysis and retrofit design. Stone, brick masonry and reinforced concrete school construction demonstrated. Based on previous DIPECHO / SEEDS initiative.	bishnuhp@gmail.com
India - Andhra Pradesh	2004		X	X	X				Andhra Pradesh network of 20 ngos involved in disaster management training	Coastal Area Disaster Mitigation Efforts, Oxfam
Indonesia	2006 -2009				X			X	Consortium for Disaster Education Indonesia (25 local and national orgs.). National workshop "Building School Resilience Towards Disaster" Oct. 2006. Road show to 16 schools in Jakarta	MPBI, Lya Anggraini, lya.anggraini@gmail.com
Indonesia	2007 -	X							Bangdung City implementing school retrofit within regular allocation for repair and maintenance. Guidelines under preparation with ITB.	UNCRD: bishnuhp@gmail.com
Indonesia	2006 -				X				The curriculum section of National Department of Education with experts have mapped course content and plan to include DRR in 'standard competency'	UNCRD: bishnuhp@gmail.com
Indonesia	2006	X							Aceh, Nias Handbook for Good Building Design and Construction (Bahasa and English) and Code of Minimum Standards http://havades.moi.ir	Robin Willison < robin.willison@undp.org >
Iran	2007						X		Guidelines on "Earthquake and Safety" for Kindergarten Teachers	F. Parsizadeh, Y.O. Izadkhan and V. Heshmati
Iran	2007	X							Bam: IFRC and IRC building three schools for the disabled	Jonathan
Iran	2006							X	National drills. Exhibits, competitions. Special events.	Faroukh Parsizadeh, IIEES, parsi@iiees.ac.ir

Iran	2005	X							Retrofit guidelines. New schools built safely. School safety act \$4 billion to fund structural improvmt	Mohsen Ashtiany, IIEES ashtiany@iiees.ac.ir
Iran	2003 -		X	X	X	X			National curricula. National drills to 16 million primary and secondary students. www.iiees.ac.ir/English/index_e.asp	Mohsen Ashtiany, IIEES ashtiany@iiees.ac.ir
Iran	1986 -present		X	X	X				Textbooks and teacher guidelines multiple subjects http://www.iiees.ac.ir/English/Publicedu/eng_publicedu.html	Yasamin Izadakah, IIEES, izad@iiees.ac.ir
Italy	2006	X							"A Prioritization Scheme for Seismic Intervention in School Buildings in Italy". Filtering methodology can be applied to 60,000 Italian schools, EERI)	Damian Grant et. al. (see Earthquake Spectra V23 N.2 p 291-314, May 2007
Jamaica	2007					X				
Jamaica	2005			X	X				Fire and earthquake drills poster competitions, cultural and culinary competitions. Plans, drills, shelters being developed	Wisner, 2006 ODPEM & UNICEF
Japan	2001			X	X	X			"Let's Learn About Survival and Safety" for grades 1-3	Wisner, 2006
Kenya	2007						X			Action Aid
Kenya	2005			X						Wisner, 2006
Kyrgyzstan	200 -		X				X		Schools in 5 villages hub for disaster teams and outreach to 11,000 in the villages and 100,000more	Christian Aid & Shoola
Laos	2007								School Safety Project (RCC MDRD mainstreaming)	ADPC
Lithuania	2005			X						Wisner, 2006
Malawi	?								Action Aid plans in southern Nsanje District prone to flooding and drought	Wisner, 2006
Macedonia	2007	X								Council of Europe
Madagascar	2005			X						Wisner, 2006
Mauritius	2005			X						Wisner, 2006
Mexico	2007 - 2010	X							Pilot School Safety Campaign program planned with DRN and Earthquakes and Megacities. Buildings to be surveyed. Goal to reduce loss of lives by 50% by 2010. Inspections, cost estimates, expert resources to be identified.	Bastidas, OAS 2007
Monaco	2005			X						Wisner, 2006
Mongolia	2005			X						Wisner, 2006
Montserrat	2005			X						Wisner, 2006

Nepal	2007-			X	X				Action Aid Nepal DipECHO funded DRR through Schools project including curriculum for children	Saadi Shashanka fsaadibd@yahoo.com
Nepal							X			IFRC
Nepal	2000 -	X					X			Amod Dixit
New Zealand	2005			X	X				http://www.whatstheplanstan.govt.nz	Wisner, 2006
Nicaragua	2004		X	X	X	X			Making risk management part of national curriculum. 9 guidebooks for teachers, 9 workbooks for children. 10 pilot schools 160 teachers trained	Wisner, 2006
Oceania	2007						X			UNESCO?
Pakistan	2008	X							2005 Earthquake affected areas	Karim Nayani, UN ISDR
Philippines	2005			X						Wisner, 2006
Philippines	2007	X							School Safety Project (RCC MDRD mainstreaming)	ADPC
Philippines	2007	X							Santa Paz Sur and Santa Paz Nor, School Relocation. School children voted to relocate the school, over parents and local shopkeepers objections. New school being constructed in Pasanon	Plan International lorraine.williams@plan-international.org
Philippines	2007						X			IFRC
Portugal	2005			X						Wisner, 2006
Romania	2007						X			IFRC
Romania	2005			X						Wisner, 2006
Russian Fed.	2005			X						Wisner, 2006
Russian Fed.	2007				X					Council of Europe
Senegal	2005			X						Wisner, 2006
South Africa	2007						X			IFRC
Sri Lanka	2006								Integration of DM into school curricula. National Disaster Safety Day promoting disaster awareness via the school curriculum	GTZ National Platform
Sweden	2005			X						Wisner, 2006
Tonga	2005			X						Wisner, 2006

Turkey	2005			X	X	X	X		Basic Disaster Awareness in Schools, 114 Master trainers in 50 provinces. Distance Learning and Master trainers reached 14,000+ teachers who reached 5 million children. Non-structural risk reduction and structural safety curricula piloted in Istanbul, and integrated into high school curricula.	Wisner, 2006 Ministry of Education, BU KOERI AHEB mpetal@imagins.com
Turkey	2005-2010	X							School retrofitting and replacement in disaster-stricken Marmara Region	Public Works
Turkey	2007-	X							School retrofitting Istanbul pilot municipalities School retrofit (part of \$305m USD retrofit for priority public facilities) 25 schools??	Istanbul Governor's Office
Uganda	2005			X						Wisner, 2006
Uzbekistan	2006	X							Training guideline for technicians and masons and school earthquake safety guidebook have been developed in Russian (English underway). Model retrofitting design for two schools in Tashkent city completed and construction to begin soon.	UNCRD bishnuhp@gmail.com
Uzbekistan	2005 -			X	X	X			Basic Disaster Awareness Instructor Training and school children training in Tashkent as model for rest of country. Being integrated into Health and Safety curriculum.	GHI, Hayot & Tashkent Technical University
UK	2007 -		X						Framework for School Safety initiated in one school.	John Twigg
UK	2005			X						Wisner, 2006
USA	2005			X					USGS/FEMA/ARC materials available "Seismic Sleuths" & "Tremor Troops"	
USA	2003 -		X						Masters of Disaster curriculum approved in some States and adopted in some school districts.	Wisner, 2006 Heidi Taylor, American Red Cross
USA - California		X							Field Act and successor law requires seismic-resistant school construction. Many buildings remain unsafe.	Arietta Chakos, COGSS
USA - Oregon		X							Legislation requires seismic-resistant school construction. Many buildings remain unsafe.	Yumei Wang
Vietnam	2007						X			IFRC
Multi-Country: Asia	2007-2008			X	X				Asia Teachers Pedagogical Resource Kit for Natural Disaster Preparedness in development	

Multi-Country: Asia	2006 - 2007			X	X				Asia: Guidelines on mainstreaming DRR into Education (& meeting of Education Ministries and NDMOs from Cambodia, Philippines and Laos at RCC 6 Kunming 2006. www.adpc.net/audmp/projectoutputs/indo/report-june-04-00-tr.html	ADPC (support from GTZ)
Multi-Country: South Asia	2007								http://www.duryognivaran.org/duryog/detail_bulk.php?id=2611&newsindex=1&arctoday=1	
Multi-Country: Central Asia	2005	X							School Disaster Preparedness Handbook adapted in Russian with Ministries of Education. Uzbekistan, Kazakhstan, Tajikistan.	GHI, Focus Humanitarian Assistance, Hayot, Man and Element
Multi-Country: Central America	1995 -	X							PRECA (Central America School Retrofitting Program: Phase 1: documentation of institutional and technical expertise. Review national school vulnerability reduction plan for policy, infrastructure planning, school mitigation projects and emergency preparedness.	Education Sector Vulnerability Reduction to Natural Hazards Program in Central America with support from OAS/DSD since 1995. OAS, GTZ, CIDA
Multi-Country: Central America		X	X	X	X				http://www.cruzroja.org/desastres/redcamp/Provention/modulos.htm#escu Two set of modules: School maintenance Safer School DRR	Marjorie.Sotofranco@ifrc.org
Multi-Country: Latin America	2007 -2008			X	X				Latin America: Resource Kit for Natural Disaster Preparedness in development	
Multi-Country: Latin America	2002 -	X							Pending Issues for the Vulnerability Reduction of the Education's Physical Infrastructure	Pedro Bastidas, OAS pbastidas@oas.org http://www.oas.org/nhp/schools_hemplan.html
Multi-Country: Latin America		X							School maintenance www.cruzroja.org/desastres/redcamp/Provention/Modulos/Mantenimiento.pdf	
Multi-Country: Latin America & Caribbean			X		X		X	X	Eduplan Hemisferico -	OAS - Pedro Bastidas Caribbean Disaster Response Agency

Multi-Country: Latin America & Caribbean			X					X	Disaster Resistant Universities of the Americas (DRUCA) -	OAS - Pedro Bastidas
Multi-Country: Various	2007							X	Research Study Volume 1: School Education for Disaster Reduction Volume 2: Disaster Education for Community People Volume 3: Case Studies	Kenji Okazaki, National Graduate Institute for Policy Studies (GRIPS) w/ IIT Bombay, NSET Nepal, ADRC, UNCRD
Multi-Country: Various - Education in Emergencies	2007-2010				X			X	UNICEF - Dutch govt grant for improving education in emergencies with strong drr component. Beginning consultative process in UNICEF	UNICEF
Multi-Country: Various - Education in Emergencies	2007							X	INEE - International Network for Education in Emergencies reaches 1,400 members. Discussing stronger incorporation of school safety and drr education in training programs and standards	INEE Secretariat / UNICEF
Multi-Country: Various - Mine Action				X	X		X		Guidelines for mine risk education http://www.mineaction.org/doc.asp?d=515	
Global – Red Cross Red Crescent Societies	2007				X		X		IFRC - Global mapping of what RC societies are doing on education and disaster risk reduction	IFRC
Global - Training and Secondary Education	2007 -							X	Capacity for Disaster Reduction Initiative (CADRI) joint effort of UNDP Bureau of Crisis Prevention and Recovery (DMPT), ISDR, OCH - support for countries to make DRR a national priority, support for learning and training orgs and practitioners, and support for networking in higher ed for DRR.	Joanne Burke, CADRI
Global - School Safety Campaign	2006-2008							X	Disaster Preparedness Begins in Schools Campaign. Regional workshops and Global Conf. 2008	Paola Albrito, UN/ISDR
Global – HFA Objective #3	2005-2015							X	UN/ISDR System: Hyogo Framework for Action. Knowledge and Education Platform. Guidelines, UNESCO & ISDR have physical libraries, Global Online Library for DRR Education to be developed as part of Prevention Web	UN/ISDR UNESCO UNICEF Et. Al.
Global - School Safety	2006-							X	Coalition for Global School Safety, international network of school safety advocates launched	COGSS

Global - Safe Schools								X	UNESCO/ UNEP-APELL guidelines for safe schools www.uneptie.org/pc/apell/publications/	
Global - Sustainable Development	2005-2014					X		X	UNESCO - Integrated campaign on education for disaster reduction in Decade highlights; "Education for Natural Disaster Preparedness in the context of International Decade of Education for Sustainable Development"; Also eg. UNESCO Intergovernmental Oceanographic Commission developing programmes on education and awareness for tsunami warning and mitigation.	UNESCO et. al.

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