

Disaster Resilience Starts with the Young

Mainstreaming Disaster Risk Reduction in the School Curriculum



ASEAN Knowledge Sharing Workshop on
Mainstreaming Disaster Risk Reduction in Education
18-19 February 2011, Malacca, Malaysia



Disaster Resilience Starts with the Young: Mainstreaming Disaster Risk Reduction in the School Curriculum

This report is the culmination of an intensive Knowledge Sharing Workshop conducted among ASEAN Member States on Mainstreaming Disaster Risk Reduction (DRR) in Education in Malacca, Malaysia on 18-19 February 2011. The workshop was conducted as a collaboration among ASEAN-UNISDR Technical Cooperation, ASEAN Secretariat, and the Asian Disaster Preparedness Center with support from the Government of Malaysia.

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Disaster Resilience

Starts with the Young



*Mainstreaming Disaster Risk Reduction
in the School Curriculum*

Initiatives on mainstreaming disaster risk reduction in education, particularly in the school curriculum, may be less visible than other activities implemented by governments, international organisations, and non-government organisations, but they are happening albeit quietly and without fanfare. Such worthy endeavors need to be showcased, sustained, and scaled up, wherever possible. These initiatives will inculcate among children and future generations a culture of disaster resilience and are laying the foundation for building a disaster resilient society.

It is in this spirit that this Workshop was endorsed by the ASEAN Committee on Disaster Management and was organised by the Disaster Management and Humanitarian Assistance Division of the ASEAN Secretariat and the ASEAN-UNISDR Technical Cooperation. It was supported by the Asian Disaster Preparedness Center and hosted by the National Security Council and Ministry of Education, Government of Malaysia.

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The Workshop is one of the activities identified in the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Programme 2010-2015. It is also a part of the flagship project of AADMER on "Building Disaster Resilient ASEAN Cities" under the Prevention and Mitigation component. The Workshop and this publication are also ASEAN's contribution to the global disaster risk reduction campaign for One Million Safe Schools and Hospitals of UNISDR. It was also held in conjunction with Malaysia's National Disaster Awareness Day through the kind support of Dato' Che Moin Bin Umar and the assistance of Ms. Munirah Binti Zulkaple and Mr. Norisham Kamaruddin.

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Abbreviations & Acronyms

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ADPC	Asian Disaster Preparedness Center
ADRC	Asian Disaster Reduction Center
AED	Automated External Defibrillator
ASEAN	Association of Southeast Asian Nations
BALS	Bureau of Alternative Learning Systems
BAPPENAS	Badan Perencanaan dan Pembangunan Nasional (Indonesia) (<i>National Development Planning Agency</i>)
BNPB	Badan Nasional Penanggulangan Bencana (Indonesia) (<i>National Disaster Management Agency</i>)
CCA	Climate Change Adaptation
CEPP	Community Emergency Preparedness Programme
CPR	Cardio-Pulmonary Resuscitation
DDPM	Department of Disaster Prevention and Mitigation (Thailand)
DepED	Department of Education (Philippines)
DPMA	Disaster Prevention and Mitigation Academy (Thailand)
DPRE	Disaster Preparedness and Response Education
DRR in ED	Disaster Risk Reduction in Education
DRR	Disaster Risk Reduction
DRRM	Disaster Risk Reduction and Management
ECHO	European Commission - Humanitarian Aid & Civil Protection
E-DRR	Education for Disaster Risk Reduction
HFA	Hyogo Framework for Action
JICA	Japan International Cooperation Agency
LCC	Local Content Curriculum
MAPDRR	Myanmar Action Plan on Disaster Risk Reduction
MDRD-EDU	Mainstreaming of Disaster Risk Reduction into the Education Sector
MERP	Myanmar Education Recovery Programme
MoEYS	Ministry of Education, Youth, and Sports
MOI	Ministry of Interior
MOU	Memorandum of Understanding
NCDM	National Committee on Disaster Management (Lao PDR)
NDMO	National Disaster Management Office (Cambodia)
NDPCC	National Disaster Preparedness Central Committee (Myanmar)
NGO	Non-Government Organisation
OBEC	Office of Basic Education Commission
RCC	Regional Consultative Committee
SCDF	Singapore Civil Defence Force
SCDRR	Safer Communities through Disaster Risk Reduction
SCEP	SMRT Community Emergency Preparedness
SNAP	Strategic National Action Plan
TOT	Training of Trainers
TWG	Technical Working Group
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNISDR	United Nations. International Strategy for Disaster Reduction

Assessment. An investigation carried out before planning educational activities and intervening in an emergency to determine needs, gaps in the response and available resources.

Assessment of Learning Outcomes. A test of learners' progress and achievement. An 'assessment of learning outcomes' is determined by and based on the curriculum of an education programme.

Capacity. A combination of the strengths, attributes, and resources available within an individual, community, society, or organisation that can be used to achieve agreed goals.

Core Competencies. The education building blocks and essential sets of knowledge and skills expected of learners (e.g. oral, written and drawing activities may be used to determine communication core competencies).

Curriculum. Refers to the selection and organisation of learning experiences for students that are deemed important for their personal and community development. It encompasses knowledge, values, attitudes and skills that should be well-selected and appropriately sequenced in compliance with learning and development needs at different ages and education stages. Usually, a curriculum is laid down through specific documents (e.g. curriculum frameworks, syllabi, textbooks and other learning resources) comprising education aims, learning objectives and expected outcomes (student competencies), learning content and methods, including student activities, strategies for assessment and evaluation.

Disaster. A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

Disaster risk. The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.

Disaster risk management. The systematic process of using administrative directives, organisations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

Disaster risk reduction. The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

Education in emergencies. Refers to quality learning opportunities for all ages in situations of crisis, including early childhood development, primary, secondary, non-formal, technical, vocational, tertiary and adult education. Education in emergencies provides physical, psychosocial and cognitive protection that can sustain and save lives.

Education response. The provision of education services to meet people's needs and rights to education during an emergency through to recovery.

Emergency management. The organisation and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps.

Formal education. Learning opportunities provided in a system of schools, colleges, universities and other educational institutions. It usually involves full-time education for children and young people. It is normally developed by national ministries of education, but in emergency situations may be supported by other education stakeholders.

Hazard. A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Learning environment and learning spaces. Places where teaching and learning happen. Examples include: private homes, child-care centres, pre-schools, temporary structures, and schools.

Learning objectives. Learning objectives articulate expected achievement of learners by the end of a course or programme and may include knowledge, attitude and skills.

Learning outcomes. Learning outcomes are the knowledge, attitudes, skills, and abilities that students have attained as a result of taking part in a course or education programme.

Life skills. Skills and abilities for positive behaviour that enable individuals to adapt to and deal effectively with the demands and challenges of everyday life. Life skills fall into three inter-related categories: cognitive; personal or emotional; and inter-personal or social. They may be about specific content areas such as risk reduction, environmental protection, health promotion, HIV prevention, prevention of violence, or peace-building.

Mitigation. The lessening or limitation of the adverse impacts of hazards and related disasters.

Monitoring and Evaluation. Monitoring is an ongoing process that regularly measures progress towards goals and objectives of programmes. Evaluations can address whether activities were relevant to stated priorities, policies and legal instruments and whether programmes were implemented in an efficient manner. Evaluation of learning outcomes makes value statements or judgments based on specific criteria with regard to student learning, the learning process and the impact of the environment (i.e. learning environment, family environment, social environment, physical environment) on the learning process.

Natural hazard. Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Non-formal education. Educational activities that do not correspond to the definition of formal education. NFE takes place both within and outside educational institutions and caters to people of all ages. It does not always lead to certification. NFE programmes are characterised by their variety, flexibility and ability to respond quickly to new educational needs of children or adults. Curricula may be based on formal education or on new approaches.

Preparedness. The knowledge and capacities developed by governments, professional response and recovery organisations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.

Prevention. The outright avoidance of adverse impacts of hazards and related disasters.

Recovery. The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.

Resilience. The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

Response. The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.

Structural and non-structural measures. Structural measures are any physical construction to reduce or avoid possible impacts of hazards, or application of engineering techniques to achieve hazard-resistance and resilience in structures or systems. Common structural measures for disaster risk reduction include dams, flood levies, ocean wave barriers, earthquake-resistant construction, and evacuation shelters. Non-structural measures involve usage of knowledge, practice or agreement to reduce risks and impacts, in particular through policies and laws, public awareness raising, training and education. Common non-structural measures include building codes, land use planning laws and their enforcement, research and assessment, information resources, and public awareness programmes.

Vulnerability. The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

This report is the culmination of an intensive Knowledge Sharing Workshop conducted among ASEAN Member States on Mainstreaming Disaster Risk Reduction in Education held in Malacca, Malaysia on 18-19 February 2011.

The overarching theme, background, and main goals of the Workshop are discussed in the Overview. It cites the collaborative work of the ASEAN, UN-ISDR, ADPC and the representatives from the Ministry of Education of each ASEAN Member State together with their respective national disaster management organisations in assessing the status of DRR mainstreaming in education, particularly in the school curriculum. It also includes benchmarking the good practices and lessons learned that various Member States have experienced through the years of implementing the mainstreaming process.

The first part of the Workshop Report discusses the importance of developing a culture of resilience at an early age, and underlines the importance that schools and educators play to achieve a disaster-resilient society. It also tackles the key concepts of DRR, disaster, and resilience. This section sets the foundation for a clearer understanding of why benchmarking good practices on mainstreaming DRR in education, particularly in primary and secondary education, is a significant endeavor.

The second part highlights selected good practices as reported by education ministries of the ASEAN Member States. These are then grouped into four performance areas, namely, Enabling Environment, Curriculum Review and Development, Teacher Training and Professional Development, and Assessment of Learning Outcomes in DRR. Drawing from good practices and lessons learned from various experiences in the region, this section describes levels of progress based on the four abovementioned areas and guide the target users of this report in planning and implementing their initiatives in mainstreaming DRR in education.

The ASEAN Knowledge Sharing Workshop on Mainstreaming Disaster Risk Reduction in Education was held on 18-19 February 2011 in Malacca, Malaysia. It was hosted by the Government of Malaysia through the National Security Council, the focal point of the ASEAN Committee on Disaster Management (ACDM) for Malaysia. The Workshop was organised by the ASEAN-UN/ISDR Technical Cooperation and the ASEAN Secretariat in collaboration with the Asian Disaster Preparedness Center (ADPC) and the Ministry of Education of Malaysia. Over 150 participants attended the plenary sessions of the Workshop including representatives from the education and disaster management sectors of nine ASEAN Member States as well as government officials from the education ministry and local governments all over Malaysia. The small group workshops were participated in by the representatives of ASEAN Member States as well as a select group of participants from the Ministry of Education of Malaysia.

Disaster risk reduction begins at home, in communities, and in schools. Education is vital in nurturing a culture of disaster resilience among people and in societies. Thus, the central theme of the Workshop was sharing of

knowledge and experiences among ASEAN Member States in integrating key concepts and messages in disaster risk reduction in subjects that are being taught to children in school, particularly in the primary and secondary levels.

The Workshop aimed to assess the state of mainstreaming disaster risk reduction in the school curriculum, learn from good practices and lessons acquired by different Member States as well as identify key performance areas of mainstreaming DRR in the school curriculum, based on their experiences.

With this report, it is hoped that more interest will be generated in the subject and allow for a more comprehensive picture of how countries are effectively mainstreaming disaster risk reduction in the school curriculum and the education system as a whole. Lastly, the Workshop Report has been developed to guide and inspire further efforts in integrating disaster risk reduction in the education of future generations in the region and contribute to cultivating an overall culture of disaster resilience.



Showcased in this report are good practices in several areas of performance in mainstreaming disaster risk reduction in the school curriculum, as mentioned in the plenary presentations and reports of the education ministries of various Member States and in the small group workshops that followed the plenary session. For a good practice to be of immediate practical use, it must be replicable in and relevant to the reader's context. The good practices compiled in this report offer unique perspectives of and approaches to mainstreaming disaster risk reduction (DRR) in school curriculum.

Why Mainstream Disaster Risk Reduction in the School Curriculum?



Typhoon-damaged school in the Philippines

Schools and Disasters

Governments from all over the world allocate significant portions of their annual budget to education, manifesting its importance as an enabling tool in building a better future for everyone. In Southeast Asia, countries put high premium on ensuring that education is accorded to children of primary school age without regard to gender, race, economic status, and socio-political background. This thrust to make education available to every child not only resonates a country's commitment to the standards set forth by UNESCO and the UN Millennium Development Goals, which are anchored on the premise of providing education for everyone, but also a commitment to equip children with appropriate knowledge and skills to deal with the challenges of a complex and constantly changing environment.

One factor that contributes to the complexity of what children face today is the occurrence of disasters. Children are particularly vulnerable to disasters as they have limited resources and capacity at their disposal. In the Southeast Asian region, ASEAN Member States are not new to disaster events in the form of earthquake, tsunami, typhoon and drought, among many others. And as the region sits on a territory susceptible to disasters, the losses that each country incurs with these occurrences continue to pose threats not only to their respective economies, but to thousands of lives as well, especially children, as recently experienced by other countries in Asia (e.g. China and Pakistan earthquakes).

The complexity of the nature of disasters underscores the paramount importance that it be addressed within the premises of a learning environment. Acknowledging that disasters are likely to happen to anyone regardless of age, place and time could lessen the aggravating factors that usually lead to lives lost. Schools and educators, with their fundamental role in shaping the minds of children to become competent adults and responsible citizens, provide the best avenue for helping the students learn at an early age the natural hazards that they face, and the actions that they have to take to reduce their vulnerabilities to disasters.



Flooded school in Thailand

School Safety



Students in Myanmar during an earthquake drill



Students doing risk mapping in Thailand

School safety is a key factor in understanding disaster risk reduction. One way to ensure school safety is by building a disaster resilient culture at an early age. This strategy involves raising awareness among elementary school children about disasters and the dangers they pose to lives and properties. Children are taught by educators or experts not only of the appropriate response when confronted with a life-threatening event, but also of the proper measures that children can do to reduce the risks in their immediate localities, whether at home or in school.

While it is commonly known that the concept of school safety is related to educating school children at the earliest possible stage, it also extends to other factors. Understanding building restrictions, observing safety precautions, and maintaining strict monitoring and regulations of school facilities and equipment are some of the ways to ensure the structural and physical safety of schools. Unlike non-structural school safety where teachers or educators and experts from relevant fields are mostly involved, school safety from a structural perspective employs careful assessment of the school setting itself by engineers and other professionals involved in building construction and maintenance.

School safety revolves around basic concepts of disaster risk reduction and disaster resilience. Disaster risk reduction (DRR) is a fairly new concept. Broadly, it revolves around the basic idea of reducing the potential impacts or losses that a particular population or area may face in relation to a particular hazard, natural or otherwise. It may involve the use of carefully crafted policies, strategies, and sound practices that could lessen the susceptibility to disaster risks of highly vulnerable communities.

The definition of resilience overlaps with how capacity is understood in that both describe the ability of an individual or a community in responding to disasters. In this Report, resilience is seen as a characteristic that allows a community to maximise its resources in order to focus on and strengthen its capacity to respond to disasters. Resilience, unlike capacity, emphasises less on the vulnerabilities of a community and highlights instead the flexibility and responsiveness of communities towards disaster situations. In this regard, disaster-resilient community is not a disaster-free community, but rather one that is resilient to the risks posed by disasters. It is able to minimise the community's vulnerability to the potential impacts of a disaster.

Disasters do not recognise age, thus children are as susceptible to suffer from the damaging results of disasters as adults are. However, children are more vulnerable in the sense that they have lesser capacity to deal with disasters than adults. Thus, raising awareness in children about what disasters are, what natural hazards exist in their specific communities, and what tools are available for them to prepare and mitigate the potential impacts of disasters will build their confidence and ability in dealing with a life threatening situation.

Schools and educators have significant roles in starting children early on about disaster risk reduction strategies as children commonly spend more time in school than at home. This is true in ASEAN Member States where most households have parents that are both employed gainfully, thus leaving their children under the full guidance of teachers. Educators who are well-informed about the importance of understanding and incorporating disaster risk reduction strategies in class lessons or school activities can influence the overall perception of children about the long-term need to foster a culture of disaster resilience.

Building a Disaster Resilient Culture at an Early Age

Learning about DRR in Lao PDR



Purpose of the Report

This Workshop Report aims to inspire education sector stakeholders such as education ministries, schools, students, parents, and stakeholders in general in their objectives to integrate disaster risk reduction in the educational system. It also seeks to provide guidance on how to effectively mainstream disaster risk reduction in the school curriculum based on actual experiences.

The mainstreaming of DRR in education is implemented by school administrators and teachers through a guideline or legal framework provided by authorities in education. This report provides a compact set of ideas revolving around the best and sound practices for DRR mainstreaming, especially among countries in ASEAN, which can be evaluated to fit unique country settings and make replication possible. School administrators and educators are also in the best position to offer recommendations to policy-makers and other relevant authorities in education on how to further improve the DRR practices they currently observe to make their efforts parallel to successful ones in other countries. The technical staff and maintenance provide support to school administrators and teachers in ensuring that the mainstreaming of DRR in education is implemented according to the guide established by authorised bodies. They assist in ensuring the safety of the schools through maintenance and monitoring of school facilities and equipment. They are likewise expected to have a sound understanding of the basic concepts and

terminologies unique to DRR mainstreaming to ensure that they can provide accurate support to the school and its students.

The students are expected to be responsive to efforts by their school administrators and educators to effectively mainstream DRR in education. Proper observation of drills, adequate understanding of concepts, adoption of appropriate skills and mindset, and active participation during class discussions about the risk of disasters in their respective communities are some of the expected response within a classroom setting or any other learning environment.

Parents' involvement in mainstreaming DRR in education is crucial as making children understand the importance of building communities that are disaster resilient begins at home. From their homes, parents and guardians are also expected to engage in active participation in the various efforts of school administrators and educators to increase awareness among children about the risk of disasters in their area and the appropriate responses to help reduce the impact of disasters.

Lastly, anchored on the role of school settings in building disaster resilient communities, policy-makers in the ministry level set the guideline needed by school administrators and teachers to implement DRR strategies and practices in the classroom and other co-curricular activities.



Good Practices in Mainstreaming DRR in the School Curriculum

2

The good practices compiled in this Workshop Report offer practical perspectives in and realistic approaches to mainstreaming DRR in school curriculum.

What is a good practice?

The following guided the selection of good practices to be included in this report.

Replicable. The practice is applicable and can be implemented or replicated in any country and in a variety of learning environments; it can also be expanded or tailored to fit a culture, context, or locality.

Focused. The practice should be focused on ensuring that children / students are learning about disaster risk reduction through the formal and/or non-formal education, and that the information transferred is updated and of high quality.

Effective. The practice must be able to contribute to increasing the knowledge and raising the awareness of teachers and children to DRR and help in reducing their risk to disasters. This can be gauged through an assessment of learning outcomes, and a change of behavior towards disaster risk reduction.

Sustainable. The practice must be stable, maintainable and viable long-term. This may include engaging the participation of stakeholders and the community in the planning and implementation.

Good Practices in Mainstreaming DRR in the School Curriculum



A good practice, in this context, is any proven idea, programme, strategy, mechanism, method, or procedure for mainstreaming disaster risk reduction (DRR) in the educational system so that students' knowledge and awareness of DRR are effectively increased. It may take the form of legislation, policy, mechanism, strategy, advocacy, curriculum development, instructional materials development, training and professional development, monitoring and assessment of learning outcomes, or any combination of these or similar actions.

ENABLING
ENVIRONMENT

Enabling environment encompasses factors that focus on creating and maintaining government actions and stakeholder cooperation that stimulate and support DRR mainstreaming in the school curriculum and in education in general. This includes political commitment, legal and regulatory systems, national DRR policies and plans, and institutional structures and mechanisms.

As noted in the Workshop, political commitment is a key ingredient in initiating, implementing, and sustaining the process of mainstreaming DRR in education. It means that the government has taken concrete steps to increase the likelihood of effective implementation of a strategy or programme on mainstreaming DRR in the educational system, given the policy environment and institutional arrangements required.

One indication of this in Member States is the proactive leadership exercised by multi-sectoral national disaster management committee in identifying the education sector as a priority sector for mainstreaming DRR. This multi-sectoral committee or council usually consists of the Prime Minister as Chair, the national disaster management organisation, the education ministry, and other relevant government agencies in the country. Thus, with this kind of leadership, initiatives on mainstreaming DRR in education have gained political support and momentum at the highest levels of government.

In addition, a technical working group (TWG) is also established under the wing of the national disaster management committee to focus on DRR mainstreaming in education. Such TWGs also have the necessary political support to sustain their initiatives. For instance, the TWG in Cambodia is led by the Under-Secretary of State of the Ministry of Education, Youth and Sports; in the Philippines, by the Under-Secretary for Teachers' Welfare, Department of Education; and for Lao PDR, by the Director of the Cabinet of the Ministry of Education. Workshop Highlight 5 further discusses the composition and work of the TWG.

Further, this collaborative arrangement exemplifies the whole-of-government approach in mainstreaming DRR in general and emphasises the importance of partnership among government agencies and stakeholders. This whole-of-government approach is concretely demonstrated by a number of ASEAN Member States through the signing of a memorandum of agreement or exchange of letters usually between the education ministry and the national disaster

management office (NDMO) with other government agencies, stakeholders, and partners.

In Thailand, for instance, a Memorandum of Understanding (MOU) among the Department of Disaster Prevention and Mitigation (DDPM), Ministry of Interior and Office of Basic Education Commission (OBEC) was signed in 2009 to cooperate on the capacity building of educational institutions for disaster prevention and mitigation. Under the MOU, DDPM will provide resource persons and technical support for building the capacities of teachers, facilitators, and students on DRR as well as collaborate on the development of guidelines, manuals, and learning materials on DRR. OBEC then replicates the training to reach out to schools throughout the country. The DDPM has also formed a partnership with Japanese International Cooperation Agency and Asian Disaster Reduction Center to develop textbooks and teachers' guides, among other education related activities.

In Cambodia, Lao PDR, and the Philippines, a Memorandum of Agreement (MOA) has been forged between the Ministry of Education and the national disaster management office, under the ADPC-UNDP-ECHO Mainstreaming DRR in Education Project. The MOA stipulates the roles of each partner in the implementation of the project. The MOE and the national disaster management office are tasked to support the institutionalisation of the DRR module in the national curriculum and in the national teachers training system; develop the national curriculum framework plan to aid in the future integration of DRR; identify opportunities for integrating disaster resilient school construction features in one pipeline project, and facilitate the expansion of the Technical Working Group and the engagement with the Education Sector Working Group.

Area of
PerformancePOLITICAL
COMMITMENT

Key Questions:

- Who are involved in setting mainstreaming DRR in education as a priority? What factors facilitated this?
- What are the manifestations of this political commitment, e.g. development and implementation of policy and strategy for mainstreaming DRR in the curriculum?

Goal: Political commitment and support to mainstream DRR in education exist, with coordination mechanisms in place involving relevant entities.

Progress:

1. Formal coordination and collaboration mechanisms (e.g. MoU) between and among the Ministry of Education, national disaster management office, other relevant government agencies established and functioning, exemplifying a whole-of-government approach to mainstreaming DRR in education.
2. Political "champions" from the Ministry of Education, NDMO or other sectors, both government and non-government, exist and are actively promoting DRR mainstreaming in education (ex. press releases, speeches, etc.), albeit in an uncoordinated manner.
3. Neither coordination mechanisms nor political "champions" exist in support of DRR mainstreaming in the education sector.

Workshop Highlight

2

LEGAL AND REGULATORY SYSTEMS

The Workshop highlighted the importance of having a legal mandate and regulations as bases for integrating DRR in school curriculum. The disaster management law in several Member States mandates this integration through specific provisions and supplementary guidelines.

For example, in the Philippines, the government enacted Republic Act 10121, also known as the Philippine Disaster Risk Reduction and Management

(DRRM) Act of 2010, which decrees the institutionalisation of disaster risk reduction in all levels and relevant sectors of government.

Mainstreaming disaster risk reduction in the country's sectoral policies, programmes, and plans therefore lies in the heart of this law. More specifically, in the Implementing Rules and Regulations of the law, the section Declaration of Policy states that it is the policy of the State to "mainstream disaster risk reduction and climate change adaptation and in development processes such as policy formulation, socioeconomic development planning, budgeting, and governance, particularly in the areas of environment, agriculture, water, energy, health, education, poverty reduction, land-use and urban planning, and public infrastructure and housing, among others."

Indonesia's Disaster Management Law (Chapter 2 of the General Provisions) states that "the Government and regional governments shall organise education and training... as formal, non-formal, and informal education in the forms of basic, secondary, technical, simulation, and rehearsal training programs" (Article

14) in the areas of "disaster management planning, disaster risk reduction, and prevention, among others" (Article 5). Further, Act No. 24 of 2007 on Disaster Management provides another legal platform for the Ministry of National Education to institute a programme called Education for Disaster Risk Reduction (E-DRR) in an effort to educate all students, primarily those who live in high risk areas. One of the initiatives that aim to implement Act No. 24 is the Safer Communities through Disaster Risk Reduction (SCDRR) in Development that is a collaborative programme between the Ministry of Home Affairs, National Development Planning Agency (BAPPENAS) and National Disaster Management Agency (BNPB) with the United Nations Development Programme. Through this programme, the Strategy for Mainstreaming Disaster Risk Reduction in Schools was formulated using a highly participatory process that involved relevant government agencies, non-government organisations, international organisations, and other stakeholders.

Based on the 1996 Education Act Allocation 130 (the authority of the Ministry to draw up regulations), the Ministry of Education in Malaysia established a Safe School Standard for all schools in the country. The Safe School Standard regulates the management of schools using five safety aspects: management of student safety when conducting activities; management of safe school infrastructure; safe management in handling social ills; safe management in handling crises and disasters; and safe management in facing threats. About 642 primary and secondary schools have carried out their own self-assessment in 2010, results of which form the basis of the MOE's capacity building programme on school safety.

Area of Performance

LEGAL AND REGULATORY SYSTEMS

Key Question:

- Is there legislation (with necessary compliance and accountability process) that requires mainstreaming of DRR in school curriculum?

Goal: Legislation is passed at the national level with provisions related to DRR mainstreaming in the education sector.

Progress:

1. National legislation passed with provisions requiring the mainstreaming of DRR in the education sector.
2. National legislation passed with provisions recommending the mainstreaming of DRR in the education sector.
3. No legislation exists related to mainstreaming DRR in education.

Policies specific on mainstreaming DRR in school curriculum are issued separately by the education ministry or incorporated in DRR national plans to complement existing national laws and regulations on disaster management in most Member States. A policy document issued by Indonesia's Ministry of National Education, the National Strategy for Disaster Risk Reduction Mainstreaming in School System, serves as a reference guide in mainstreaming DRR in education, outlining programmes, strategic framework, and implementation of learning based on three key strategic components:

(1) Empowerment of institutional roles and school community's capacity; (2) DRR integration into the school curriculum; and (3) Establishment of partnership and network between various parties to support the implementation of DRR initiatives in schools. The implementation of the strategy is regulated in the Circular Letter that was distributed to all the Governors and Regents/Mayors in Indonesia in order to implement disaster management activities at the school level. In addition, Indonesia's National Action Plan (NAP) for DRR 2010-2012 identifies the "Use of Knowledge, Innovation, and Education to Build Safety Culture and Resilience" as its Priority no. 2. The programme on Research, Education, and Training under this priority has 22 activities focusing on the development of disaster awareness and culture. The Ministry of National Education is one of the coordinating agencies tasked to implement these activities.

The Philippines' Department of Education has issued a standing order (DepEd Order 55 s.2007) titled "Prioritizing the Mainstreaming of Disaster Risk Reduction Management in the School System and Implementation of Programs and Projects Relative There for" to endorse and facilitate the integration of DRR in both structural (i.e. safe schools) and non-structural (i.e. curriculum) components of the school system. It directs the utilisation of the department's Disaster Risk Reduction Resource Manual as a guide for implementing DRR programmes, mainstreaming of DRR concepts in elementary and secondary school curricula, and development of multi-media modules on disaster preparedness, among others. Another standing order (DepEd Order 82 s.2010) titled "Reiteration of Related Implementing Guidelines on

Climate Change Adaptation and Disaster Risk Reduction at the School Levels" directs schools to revitalise the various programmes and projects on DRR including mainstreaming of DRR and integration of climate change adaptation in school lessons. Various memorandums have also been released to support such standing orders, such as DepEd Memo 276 s.2010 which orders integration of climate change adaptation and DRR with environmental education into elementary and high school curricula. A memorandum was also issued to all accredited publishers of educational materials to authorise them to publish approved instructional materials on DRR and climate change adaptation. Lastly, in its Strategic National Action Plan (SNAP) for DRR, the Philippines pinpoints Education and Research as a priority programme. The programme aims to integrate DRR modules at the primary, secondary, and tertiary levels as well as support the training of teachers on DRR. The goal is to fully integrate DRR into both formal and informal education in the country by 2015.

In Thailand, a standing order for "Mainstreaming DRR in Education" has been issued to promote disaster education in all schools, production and dissemination of textbooks and teachers' guide, and training of school teachers on disaster education. This is reinforced by the country's Compulsory Action Plan as stated in their Strategic National Plan (SNAP) for DRR 2010-2019, which emphasises the provision of knowledge on hazards and DRR to youth at all levels. The target is to complete the curriculum on DRR for primary, secondary, and university levels by 2014.

The Myanmar Action Plan on Disaster Risk Reduction (MAPDRR) 2009-2015 also highlights public awareness, education, and training on DRR as one of the major components of the plan. Two priority projects being implemented under this component are Awareness through School and School Curriculum and Awareness through University Curriculum. In Cambodia's Strategic National Action Plan (SNAP) for DRR, one of the six key components is to "use knowledge innovation and education to build a culture of safety and resilience." Mainstreaming of DRR into the school curricula and formal education system is tasked as a major activity of the Ministry of Education, Youth and Sports (MoEYS) and is listed as one of the three first level priorities of the plan.

Key Questions:

- Does the government have a national DRR policy and/or plan? Do these national DRR policies and/or plans include mainstreaming DRR in education as a goal and key component?
- Has the education ministry issued an official policy statement on mainstreaming DRR in the school curriculum as a priority? Is the policy reflected in the internal and external documents of the ministry?
- Is the policy well understood and accepted across the different departments/offices of your ministry?
- Does the policy translate into allocation of resources?
- Has the understanding and acceptance of policy resulted to practice?

Goal: A clear policy for mainstreaming DRR in the school curriculum is adopted and properly communicated within the education ministry as well as to other government agencies with corresponding allocation of resources.

Progress:

1. Official policy on mainstreaming DRR in the school curriculum adopted and being implemented by the Ministry of Education, with corresponding budget support.
2. Policy on mainstreaming DRR in school curriculum still being developed, but there exists a national plan for DRR that includes mainstreaming DRR in education as a priority.
3. The Ministry of Education has no policy related to mainstreaming DRR in school curriculum; National plan for DRR does not identify mainstreaming DRR in education in general as a key component or strategy.

Workshop
Highlight

4

INSTITUTIONAL
STRUCTURES AND
MECHANISMS

In most Member States, the creation of a technical working group (TWG) has effectively worked as an institutional means to implement and sustain DRR mainstreaming in the school curriculum. This is usually done as a collaboration between the education ministry and national disaster management organisation with support from relevant government agencies as members, as in the case of Cambodia, Lao PDR, Myanmar, and the Philippines. The focal points are usually the education ministry and the national disaster management organisation, though

the composition of the TWG may vary from country to country. (See Annex 4 for the composition of TWGs in several countries.)

In Myanmar, the Disaster Preparedness and Response Education (DPRE) Working Group is convened by the Ministry of Education and the United Nations Education, Scientific and Cultural Organization (UNESCO) and counts other UN agencies, international non-government organisations (NGOs), and local NGOs as members. It was formed in August 2008 (in the aftermath of Cyclone Nargis). The DPRE is the technical group that is in charge of capacity building for teachers, integrating DRR in the curriculum, and developing teaching and learning materials on DRR. It also implements activities on school preparedness and emergency planning and safer school construction.

Another body that is concerned with mainstreaming DRR in education in Myanmar is the Education Thematic Working Group, which is led by the Ministry of Education with the support of UNESCO and Save the Children. It advocates for and supports the collaborative establishment of a sound and sustainable national education system in Myanmar, during normal times. In the event of a disaster, it is activated as the Education Cluster.

The TWGs engage in partnerships with international and regional agencies and non-government organisations to broaden the technical and support base for their initiatives and, in some cases, count them as members of the TWG for better and sustained collaboration. For example, Cambodia, Lao PDR and Philippines implemented a programme on Mainstreaming of Disaster Risk Reduction into the Education Sector from 2007 to 2009 under the aegis of the Regional Consultative Committee of Asian Disaster Preparedness Center (ADPC), with the support of United Nations Development Programme and the European Commission on Humanitarian Aid Department. The ADPC acted as the secretariat for this programme. Aside from integrating DRR into the school curriculum, the TWGs in these Member States also promote resilient construction of new schools.

In the case of Thailand, the DDPM has also formed a partnership with Japanese International Cooperation Agency and Asian Disaster Reduction Center to develop textbooks and teachers' guides, among other education related activities.

Aside from engaging in the review and development of the school curriculum and enhancement of instructional materials and resources (i.e. teachers' guide, student modules, teaching aids), the TWGs are also responsible for monitoring and evaluation of the implementation process, results, and outcomes of DRR mainstreaming in the school curriculum which is a long-term task. The TWGs also ensures a transparent, and inclusive approach by facilitating the involvement of national stakeholders and international and regional organisations through the conduct of multi-stakeholders consultations and establishing strong linkages with other concerned government agencies.

Area of
Performance

INSTITUTIONAL
STRUCTURES
AND
MECHANISMS

Key Questions:

- Does a multi-sectoral committee (or equivalent) for mainstreaming DRR in school curriculum exist?
- Does it have the authority, resources, and mechanisms to implement changes?
- Does it have access to the highest decision-making offices in relevant ministries? Is it working with the appropriate authorities?
- Are there well-defined institutional mandates and responsibilities?
- Does it have the benefit of public support and has it been successful in implementing changes?

Goal: A multi-sectoral committee (or equivalent) is established and functioning with clear mandates, authority, mechanisms and resources to spearhead the mainstreaming of DRR in school curriculum.

Progress:

1. A multi-sectoral committee (or equivalent) exists and functions with clear mandates, authority, mechanisms and resources to implement DRR-related changes in the school curriculum.
2. A multi-sectoral committee (or equivalent) exists but without clear mandates, authority, mechanisms or resources to implement DRR-related changes in the school curriculum.
3. A multi-sectoral committee (or equivalent) does not exist and there are no plans to create one in the present time.

Workshop Highlight 5

USING THE NATIONAL CURRICULUM DEVELOPMENT PROCESS TO MAINSTREAM DRR

CURRICULUM REVIEW AND DEVELOPMENT

The national curriculum development process may vary from one Member State to another, but in general, the process involves the following major steps: needs assessment and planning, content development, and pilot delivery and revision.

In some Member States, the TWG (refer to Workshop Highlight 4), which is the curriculum review and development team, strictly follows the curriculum development process as a practical strategy to mainstream DRR. The TWG may be further expanded to include relevant departments or divisions in the education ministry such as the department of general/primary and secondary education and teacher training center. Under the supervision of the focal points, the TWG members guide the development of the DRR curriculum materials. The first crucial step in mainstreaming DRR in the school curriculum is for the TWG to formally initiate the review of its existing school curriculum vis-à-vis the natural hazards that the country is exposed to and the potential social, physical, psychological, and economic impacts of disasters in order to assess the needs for DRR mainstreaming of the education sector.

Based on the results of the needs assessment, appropriate school subjects and grade levels are then selected for mainstreaming. A competency-based approach anchored on the respective national education standards of Member States is part of the national curriculum development process. This approach is anchored on the learning competencies that include knowledge, skills, and attitudes or behaviors which are honed and expected of each grade in the different subjects of the curriculum. It also facilitates the identification of pedagogical strategies, i.e. classroom activities and content of teaching aids, which teachers can use in the delivery of approved teaching modules and reference materials on DRR.

To illustrate this approach, DRR integration in Myanmar has been done for various grade levels in the General Science, English, and Geography school subjects, as shown in the table below (Table 1).

For Cambodia, Lao PDR and the Philippines, mainstreaming has been initiated in lower secondary level and existing grade subjects based on the analysis of the ability of the specific age cohort to communicate knowledge to peers, family members, or their community. In Cambodia, the existing curriculum for Grades 4 to 6 and 7 to 8 has been identified as appropriate for DRR integration, in particular in Practical Science and Social Studies and in Geography and Earth Science subjects, respectively. For Lao PDR and the Philippines, the identified subjects are Natural Science/Earth Science and Social Science/Geography for Grade 6 and Grade 7. For these three countries, the competency-based approach means that no new subject will be developed and DRR topics and concepts are integrated only in existing subjects. Points of entry in the identified subjects are also determined only after core DRR messages and concepts have been determined using this approach.

Table 1
Myanmar's
School Curriculum
Integrating DRR

Level	Grade	Topic	Subject
Primary	5	Caution in Emergencies (floods, tsunami, earthquake, fire)	Life Skills
Lower Secondary	6	Thunderstorm	General Science
		Emergency! It is Flooding!	Life Skills
	7	Disaster Preparedness (disaster family plan, emergency kit, evacuation map)	Life Skills
	8	Storms	General Science
		Earthquake; Landslides; Safety in Case of Fire	Life Skills
Upper Secondary	10	Earthquakes	English
	11	Earth Surface Processes	Geography

In the case of Indonesia, aside from integration in existing subjects, the Ministry of National Education also employs the strategy of DRR mainstreaming in Local Content Curriculum (LCC), which allows special subjects to be taught based on the local needs and potentials. This is because of the country's exposure to many types of natural hazards and disaster risk profile depending on the location. Still, competency standards and basic competence should be developed by the individual school or schools within the same district for the special subject. The development of LCC needs to be approved by the district office of the education ministry. Lastly, DRR has also been integrated in the self-development programme curriculum of the education ministry.

In Thailand, a national curriculum on disaster education has been developed generally to enhance the ability of students to understand how and why natural disasters happen and increase their awareness and preparedness for disasters. At the same time, the

education ministry allows curriculum review and adaptation that is school-based, which is similar to Indonesia's strategy. Based on the national curriculum, the subjects identified for integration are Social Sciences, Science, and Health Education. The table below (Table 2) shows how DRR topics have been mainstreamed in the curriculum.

In Singapore, DRR is taught as part of the Social Studies subject where key concepts and topics on vulnerability, social awareness, keeping the environment safe, transnational terrorism, and collective security are integrated.

In Viet Nam, key concepts and simple guidelines for main types of hazards are incorporated in Popular Science (primary level) and Geography (elementary level). More DRR topics will be included in the school curriculum after the Ministry of Education and Training's strategy for DRR in education is approved.

Table 2
Thailand's
School Curriculum
Integrating DRR

Level	Grade	Topic	Subject
Upper Primary / Lower Secondary	4,5,6	Physical Geography (understanding the Earth's physical structure, space relationships, understanding the relationship between humans and environment)	Social Studies
Upper Primary / Lower Secondary	4,5,6	Living Being and Life Existence Process Life and Environment Evolution of the Earth	Science
Upper Primary / Lower Secondary	4,5,6	Safety (preventing and avoiding risky factors and behaviors, accidents, use of drugs; narcotics and violence)	Health Education

Key Questions:

- Has the regular curriculum review and development process been followed to integrate DRR in the school curriculum?
- Has it been done legitimately under the authority of relevant education bodies?
- Has the process been institutionalised since then, i.e. regular process for integration of DRR in selected grades and subjects?
- Does formal curriculum articulate the relevant knowledge, attitudes, skills, and learning outcomes in disaster preparedness, mitigation and prevention that learners are expected to acquire?
- Have the modified or newly developed curriculum materials been pilot tested? Has the teacher and learner feedback from the pilot test been incorporated as much as possible into the texts prior to large-scale dissemination of curriculum and learning materials?

Goal: Integration of DRR in the school curriculum is institutionalised as part of the regular curriculum review and development cycle.

Progress:

1. Relevant knowledge, attitudes, skills, and learning outcomes related to DRR are fully integrated in the school curriculum as part of the regular curriculum review and development cycle.
2. DRR integration is incomplete or incipient, and not yet part of the regular curriculum review and development cycle.
3. DRR is not yet integrated in the school curriculum, although there are plans to do so in the near future.

**Area of
Performance**

**USING THE
NATIONAL
CURRICULUM
DEVELOPMENT
PROCESS TO
MAINSTREAM
DRR**

Workshop
Highlight

6

DEVELOPING INSTRUCTIONAL MATERIALS ON DRR AND PILOT TESTING

Development of instructional materials likewise uses the competency-based approach within the process of national curriculum development and follows the learning competencies and standards set by the education ministry. This is a common approach used by several countries in developing content for integration in existing school subjects and in preparing instructional materials such as textbooks, teacher's guide, lesson exemplars/plans, student modules, and teaching aids. Instructional materials are also usually written in the local language.

It is also recommended that DRR-integrated curriculum and instructional materials are pilot tested and validated before reproduction and distribution to schools. Pilot schools may be selected based on the hazardousness of the district or province where they are located. Based on experiences of various Member States, pilot testing the materials should provide enough time to allow both students and teachers to digest the content and for the TWG to identify areas for improvement and make necessary revisions. In some Member States, curriculum and instructional materials undergo both expert and field validation prior to being implemented.

For pilot testing, TWG members may formulate an evaluation form to assess the appropriateness of the content and the delivery of the teachers and act as evaluators of the process together with school officials. Prior to pilot testing, teachers and education officials from selected schools, districts, and provinces should be trained on the use of the newly developed materials.

In Cambodia, Lao PDR, the Philippines, and Singapore, such instructional materials also follow the

prescribed format in the development of formal curriculum. In terms of content, in Lao PDR, student modules cover the different types of hazards such as landslides, droughts, fire, earthquake, pollution, road accident, and social unrest. A teacher's guide has been developed to accompany the student modules. Six story booklets as additional teaching aids have been developed by the Ministry of Education on topics like road accident, fire and storm, drought, and landslides. These materials have been approved by the MOE for use throughout the country. The posters and story booklets have also been approved by the Ministry of Information and Culture.

Student modules in Cambodia cover information about different natural hazards, disaster prevention and mitigation measures, and safety procedures. A teacher's guide has also been developed to ensure effective delivery of DRR lessons. With the help of NGOs, the MoEYS and the TWG have developed teaching aids such as posters that focus on safety measures before, during and after disasters such as floods, drought, and fire. These have been subsequently endorsed by the education ministry and approved by the Prime Minister.

In the Philippines, the Department of Education (DepEd) has developed modules and lesson exemplars on mainstreaming DRR to be used by teachers and students. The lesson exemplars and teacher/student modules were developed for the secondary curriculum, specifically for Science and Social Studies subjects. The lesson exemplars contain strategies and methods of teaching DRR, while teacher/student modules serve as reference materials. These materials have gone through a series of testing and validation with experts from the Department of Science and Technology and Department of Environment and Natural Resources, while the Instructional Materials Council-Secretariat has also reviewed and approved the materials for

Learning materials on DRR in the Philippines (left) and Lao PDR (right)



printing. This initiative is done in partnership with the National Disaster Coordinating Council.

For Indonesia, hazard-specific textbooks have been developed for primary, junior secondary and senior secondary levels. These textbooks focus on disaster knowledge, preparedness, and recovery. A training manual, 15 DRR modules, and reference materials have likewise been produced. Like the materials developed in other countries, these also cover the phases of disasters, i.e. before, during, and after, and are published in the local language. Teachers in Indonesia are further encouraged to develop DRR textbooks for local use based on the national guidelines provided by the education ministry, which will then be evaluated and approved based on the expected competencies of students. Schools in high risk areas have the flexibility to develop their own teaching materials on DRR considering local needs and conditions.

Similarly in Thailand, hazard-specific textbooks on landslide, flood, and tsunami have been prepared for primary to lower secondary levels and focus on disaster knowledge, recovery, preparedness, and evacuation. A teacher's guide has also been produced for use with the textbooks to assist teachers in

conducting activity-based lessons such as hazard mapping, Disaster Imagination Game (DIG), and evacuation exercise. Like in Indonesia, teachers are also encouraged to develop DRR textbooks based on guidelines provided by education ministry.

Lastly, most ASEAN Member States have produced DRR resource manuals, guidelines, resource packs, and multi-media materials which teachers could draw from when they incorporate DRR in the subject they are teaching or teach DRR as a module. In the case of the Philippines, the DRR Resource Manual developed by the Department of Education provides a uniform or standard knowledge for teachers and education administrators that cover both DRR concepts for curriculum integration and guidelines for school safety and post-disaster continuity of learning. The manual serves as a ready reference on human-induced (structure collapse, fire, vehicular-related accidents, chemical spill, electrical blackout and food poisoning) and natural hazards (earthquake, tsunami, volcanic eruption, and astronomical hazards) and what to do before, during, and after disaster situations. In Vietnam, a Guidebook for Flood and Storm control is published and disseminated nationwide and used as training material.

Area of Performance

DRR INSTRUCTIONAL MATERIALS DEVELOPMENT AND TESTING

Key Questions:

- Has your ministry developed curriculum and instructional materials integrating DRR? Have these materials been approved by relevant authority? Is the authority involved in the curriculum review and development process?
- Are such materials available for all primary or secondary grades they have been intended for, i.e. produced for the entire country?
- Have such materials been tested and supported by trainings or orientations to ensure understanding and capacity to use?

Goal: Accurate and adequate instructional materials integrating DRR are developed and approved by relevant authorities.

Progress:

1. Instructional materials integrating DRR are developed and validated by experts, duly approved by relevant authorities, and distributed for nationwide usage.
2. Instructional materials integrating DRR are partially developed and not available for the entire country.
3. Instructional materials are developed without conscious consideration for DRR.

A student reading a DRR textbook in the Philippines



Workshop Highlight

7

DRR IN CO-CURRICULAR AND EXTRA- CURRICULAR ACTIVITIES

School-based activities that complement, but are not part of the school curriculum and may even fall outside of the regular scope of the curriculum, are considered necessary in reinforcing DRR lessons taught inside the classroom. Schools are encouraged to program their academic calendar and allocate time and resources for such co-curricular and extra-curricular activities.

Countries like Indonesia, Malaysia, Philippines, and Singapore carry out co-curricular and extra-curricular programmes related to DRR. Activities

include full-scale emergency exercises or drills, drawing competitions, debates, quiz bees, learning journeys, and theater performances, among others.

Singapore has a well-articulated co-curricular and extra-curricular programme on DRR. For instance, students take part in special activities held annually to reinforce key DRR messages taught in school, such as Total Defence Day, Racial Harmony Day, civil defence demonstrations on fire-fighting and first aid, and demonstrations on emergency preparedness and management by the Red Cross and National Civil Defence Cadet Corp. In addition, a school-based full scale emergency exercise led by the Singapore Civil Defence Force is conducted regularly and involves school officials, teachers, students as well as parents. Smaller scale fire and evacuation drills are likewise conducted to supplement the full-scale exercise. In addition, part of the school safety programme of Singapore is the formation of School Emergency Organisation which also includes a psycho-social component.

In terms of extra-curricular activities, schools in Singapore conduct trainings and workshops for

students, communities, and the general public. Two of these activities are the SMRT Community Emergency Preparedness (SCEP) Programme and Community Emergency Preparedness Programme (CEPP). The SCEP is a public awareness and education programme designed to enhance the role of the community in making their community safe and encourage students to share ownership of security. The CEPP is a programme led by the Singapore Civil Defence Force that provides both theory and practical training for students and the public. It includes modules on Basic First Aid, Fire Safety and Casualty Evacuation, and Emergency Procedures and Unconventional Threats.

In Malaysia, DRR and emergency-related drills are also conducted as extra-curricular activities that involve the participation of boy scouts, the police, and fire brigade. Similarly in Vietnam, extra-curricular activities are held in schools for both student and teacher to help them learn about disasters and response.

In Thailand, learner development activities are co-curricular activities that encourage students to devote themselves to their communities and provide voluntary services for the benefit of society.



Students during a DRR Workshop in Lao PDR

Area of Performance

DRR IN CO-CURRICULAR AND EXTRA- CURRICULAR ACTIVITIES

Key Question:

- Are there any co-curricular and extra-curricular activities or programmes related to DRR? What are these activities and how are they implemented?

Goal: Co-curricular and extra-curricular programmes related to DRR are included in the academic calendar, with adequate allocation of time and resources.

Progress:

1. Co-curricular and extra-curricular activities related to DRR are being planned and conducted regularly as part of the academic calendar
2. Co-curricular and extra-curricular activities related to DRR are being conducted irregularly or on an ad hoc basis.
3. Co-curricular and extra-curricular activities related to DRR are conducted rarely, if at all.

Workshop
Highlight

8

**NON-FORMAL
EDUCATION
ACTIVITIES
IN DRR**

Community-based initiatives contribute to raising awareness and enhancing preparedness for disasters among children outside the school environment. Among ASEAN Member States, Viet Nam's community-based DRR projects have targeted awareness-raising on disaster preparedness among children who are not attending school. These children are taught to prepare risk maps, locate evacuation areas, protect themselves from drowning, help other children, and communicate disaster preparedness to other community members.

In Thailand, an annual youth camp on disaster prevention and mitigation is organised for children to learn about hazard and risk mapping, first-aid, rescue and emergency response, and participate in drills, among others

In the Philippines, DRR has been integrated in the non-formal curriculum known as alternative learning under the Bureau of Alternative Learning Systems (BALS) of DepEd. The focus of the non-formal education is out-of-school youth and students taking up technical and vocational courses on agriculture and fishery. Moreover, DRR concepts have also been integrated in the environment textbook used for non-formal education. The textbook has been approved by DepEd and printed out for use by students taking up non-formal or alternative learning education.

Area of
Performance

**NON-FORMAL
EDUCATION
ACTIVITIES
IN DRR**

Key Questions:

- Is DRR incorporated in community-based activities and other alternative learning programmes? How is it being integrated?
- Do textbooks and other instructional materials used in non-formal education activities reflect important DRR concepts?

Goal: DRR is incorporated in non-formal education through community-based activities and other alternative learning programmes.

Progress:

1. DRR is taught as part of an established non-formal education programme, such as through community-based activities, with corresponding textbooks and other instructional materials fully developed.
2. DRR is not yet formally incorporated in non-formal education activities, but certain initiatives and plans are currently underway.
3. DRR is not integrated in non-formal education and there are no plans to do so in the present time.

Students learning about search and rescue in Thailand



TEACHER TRAINING AND PROFESSIONAL DEVELOPMENT

Capacity building and continuous professional development of teachers and school officials are necessary to produce professional teachers who have the theoretical knowledge and understanding, combined with practical skills, competences, and commitment to teach DRR according to national standards.

Teachers and school administrators undergo a teacher training programme and a “training of trainers” (ToT) programme on DRR and emergency response which is usually supported by INGOs and NGOs. The ToT approach is used most of the time to maximise existing resources and expedite the capacity-building process. Teachers may also be trained to produce their own materials on DRR and to formulate DRR action plans that can be applied in their particular school.

In Thailand, as mentioned in Workshop Highlight 1, the OBEC and the DDPM entered into an MOU in 2009 to cooperate on the capacity building of facilitators, teachers and education officials on DRR. DDPM's role is to design the plan for ToT and provide the manuals and training materials. Initially, school teachers were chosen from five regions in the country to train on disaster education and were expected to train other teachers in the rest of the country. Similarly, the training for facilitators in education service areas has been conducted mainly at the Disaster Prevention and Mitigation Academy (DPMA) of Thailand. This will then be expanded or replicated into facilitator training in schools.

In Cambodia, a training of teachers and teacher trainers was organised to use the DRR-integrated curriculum and instructional materials. In the training, teachers/trainers were provided guidelines for writing lesson plans and had to undergo practice teaching, simulation exercises, as well as receive feedbacks on techniques and delivery of DRR teaching methodology from school officials, trainers, and TWG members.

Teacher training can also be done in partnership with NGOs working in capacity building of teachers in DRR. For example, the NCDM and MoEYS of Cambodia have engaged local NGOs such as Action

Aid and Plan Cambodia. With Plan Cambodia's Mainstreaming Disaster Risk Reduction in Curriculum of Primary School project, the MoEYS aims to integrate DRR and CCA in lower secondary school curriculum in nine pilot schools, while NCDM provides technical assistance.

In Myanmar, the Ministry of Education has worked closely with UNESCO through the Myanmar Education Recovery Programme (MERP) project since 2009 to develop a comprehensive training package for Disaster Risk Reduction in Education for school principals, teachers, and township education officers. Seven training modules based on the Hyogo Framework for Action Priority Areas have been produced, along with a DRR glossary and an activity book. So far, 72 Master Trainers from the Department of Educational Training and Planning and the Department of Basic Education 1 and 3 have been capacitated through workshops. They will in turn train local school principals and teachers in the use of the educational package.

In Myanmar and the Philippines, the inclusion of an individual DRR course in teacher education programmes at the tertiary level (colleges and universities) is being proposed so that all teachers are equipped to teach DRR when they graduate, ensure long-term sustainability of DRR integration in education, and reduce future training costs at the same time.

Workshop Highlight 9 TRAINING OF TEACHERS IN DISASTER EDUCATION

Area of Performance

TEACHER TRAINING AND PROFESSIONAL DEVELOPMENT IN DRR

Key Questions:

- Are curriculum changes linked to training and continued support of teachers to ensure curriculum changes are supported at the classroom level?
- Are there resources to coordinate and support necessary training, orientation, or re-orientation of trained teachers?
- Are there immediate programmes for skills development for specific areas such as pedagogy, educational modalities, and content done through workshops, online, study visits, and other alternative forums?
- Is there a long term capacity development programme for teachers and relevant education personnel for the purpose of teaching DRR?

Goal: Teachers and relevant education personnel are properly trained on teaching DRR as part of the school curriculum.

Progress:

1. Short- and long-term training and professional development programmes related to teaching DRR are provided to teachers and other personnel, which may be done in collaboration with INGOs, NGOs and other concerned stakeholders.
2. There are no long-term programmes for training teachers on DRR, and short-term interventions are still inadequate to capacitate all teachers and other relevant education personnel.
3. There are presently no opportunities for teachers and other relevant education personnel to enhance their knowledge and skills in teaching DRR.

Workshop Highlight 10

ASSESSING STUDENT KNOWLEDGE ON DRR

As part of the regular process of assessment by schools and teachers, DRR-integrated school curriculum and instructional materials are evaluated for their effectiveness and further refined.

In the Philippines and Lao PDR, regular evaluation of student knowledge on DRR has been carried out through tests and examinations in relevant subjects. Other assessment methods have been used as well such as requiring students to do school projects focusing on DRR.

In Cambodia, a survey using questionnaires was conducted to check on student knowledge on DRR. The assessment was piloted in two provinces and six schools near Tonle Sap and Mekong Rivers, which are very flood prone areas. This survey has been done as part of the curriculum review of Cambodia in 2011.

ASSESSMENT OF LEARNING OUTCOMES

Assessment of learning outcomes is undertaken to monitor students' learning, gauge what students know, and determine specific areas which need improvement. Aside from evaluating student's learning, effectiveness of instruction is likewise assessed so that teaching can be adjusted as needed and instructional techniques and materials are adjusted to meet students' learning needs.

Area of Performance

ASSESSING STUDENT KNOWLEDGE ON DRR

Key Questions:

- Is there an established mechanism to assess students' acquired DRR knowledge and skills as a result of the DRR-enhanced school curriculum?
- Are evaluation results shared with those responsible for revising, drafting, and implementing curricular changes to ensure that any adaptations respond to actual need?

Goal: Learning outcomes are progressively assessed to ensure that DRR-related curricular changes are adapted to current and actual needs.

Progress:

1. Assessment of learning outcomes is comprehensive and progressive and effectively linked to the curriculum review and development cycle.
2. Evaluation of students' DRR-related knowledge and skills is weak and limited mostly to tests and examinations in relevant subjects.
3. There is no established mechanism to effectively assess learning outcomes related to DRR.

Students in Lao PDR during a learning evaluation



Annex 1

ASEAN Knowledge Sharing Workshop on Mainstreaming Disaster Risk Reduction in Education

18-19 February 2011, Melaka International Trade Center, Malacca, Malaysia

Programme of Activities

18 February Friday	Knowledge Sharing on Mainstreaming DRR in School Curriculum <i>Venue: Auditorium, Level 1</i>
1030-1045	<u>Opening Ceremonies</u> <ul style="list-style-type: none"> • Dr. Khair bin Mohamad Yusof, Deputy Director General, Ministry of Education, Malaysia • Ms. Helena Molin Valdes, Deputy Director, UNISDR • Ms. Ronilda Co, Project Manager, Asian Disaster Preparedness Center (ADPC) • H.E. Dato' Misran Karmain, Deputy Secretary-General for ASEAN Socio-Cultural Community
1045-1100	Objectives and Structure of the Workshop Dr. Marqueza L. Reyes, ASEAN-UNISDR Technical Advisor for DRR, ASEAN Secretariat
1100-1230	<u>Plenary Session 1: Briefing on the status of DRR Mainstreaming in Education in ASEAN Member States</u> <i>Facilitator: Dr. Marqueza L. Reyes, ASEAN Secretariat</i> <ul style="list-style-type: none"> • Malaysia: Dr. Khair Bin Mohamad Yusof, Deputy Director General of Education Ministry of Education • Myanmar: Ms. Kyu Kyu Shwe, Assistant Director, Department of Basic Education No.3 • Singapore: Mr. Lim Chen Chye, Assistant Director, Operations & Training, Security and Emergency Planning, Ministry of Education • Thailand: Mrs. Sararat Leepaiboon, Education Specialist, Ministry of Education • Viet Nam:: Ms. Nguyen Thi Thuy Lieu, Deputy Chief, Department of Dyke Management , Flood and Storm Control
1230-1245	Open Discussion
1245-1445	Lunch and Friday Prayer
1445-1600	<u>Plenary Session 2: Case Studies on Good Practices in Mainstreaming DRR in School Curriculum</u> <i>Facilitator: Ms. Ronilda Co, ADPC and Dr. Marqueza L. Reyes, ASEAN Secretariat</i> <ul style="list-style-type: none"> • Cambodia: Mr. Eng Kimly, Director of Dept. of Curriculum Development, Ministry of Education, Youth and Sports • Lao PDR: Mr. Chantalangsy Thippamonh, Ministry of Education
1600-1630	Refreshments
1630-1730	Continuation of Plenary Session 2 <ul style="list-style-type: none"> • Indonesia: Ms. Diah Harianti, Head, National Curriculum Center, Ministry of National Education • Philippines: Dr. Corazon L. Echano, Department of Education
1730-1800	Open Discussion and Summary of Day 1
2000-2230	Official Dinner hosted by the Melaka State Government

19 February Saturday	Benchmarking DRR Mainstreaming in School Curriculum in the ASEAN Region <i>Venue: Meeting Room 1 & 2</i>
0900-1015	<p><u>Workshop 1: State of the Art in DRR Mainstreaming in School Curriculum</u></p> <p><i>Guide Questions:</i></p> <ul style="list-style-type: none"> • What are the strong (good practices) and weak areas (challenges) in DRR mainstreaming in school curriculum in various Member States (e.g. in terms of policy, strategy, implementation process, learning materials development, teacher training, etc.) • Which countries have achieved the most in the various areas of DRR mainstreaming in school curriculum? • How did they do overcome the challenges? What ways (approaches/steps) and means (resources requirements) have they utilised to get where they are now?
1015-1030	Open Discussion
1030-1100	Refreshments
1100-1215	<p><u>Workshop 2: Benchmarking the DRR Mainstreaming Process in School Curriculum</u></p> <p><i>Guide Questions:</i></p> <p>This workshop aims to identify and understand good practices and processes that have worked in the region as an initial step in the benchmarking process.</p> <ul style="list-style-type: none"> • From your experiences and observations, what are the effective principles and practices of your DRR mainstreaming program that could be replicated and/or improved upon by other programmes? • Are there common patterns and regularities in DRR mainstreaming in education that worked well in different countries? If yes, what are these outstanding commonalities? • Can these achievements be measured? If yes, how?
1215-1230	Presentation of Workshop Outputs and Plenary Discussion
1230-1245	Summary of the Workshop
1245-1300	Closing Ceremonies
1300-1430	Lunch
1430-1630	Malaysia's Launch of One Million Safe Schools and Hospitals Campaign and Resilient Cities Campaign and National Disaster Awareness Day

Annex 2

ASEAN Knowledge Sharing Workshop on Mainstreaming Disaster Risk Reduction in Education

18-19 February 2011, Melaka International Trade Center, Malacca, Malaysia

PROCEEDINGS

Mainstreaming DRR in Education

A legally-binding regional agreement, the ASEAN Agreement on Disaster Management and Emergency Response (AADMER), embodies the region's comprehensive policy in all aspects of disaster management. It likewise highlights a proactive regional framework for cooperation and coordination in disaster risk reduction. This emphasis by AADMER on disaster risk reduction rightly aligns the ASEAN disaster management policy with the well-known shift in disaster paradigm from a purely humanitarian response and relief perspective, where disasters are seen as exceptional extreme events created entirely by natural hazards, to one that views disasters as articulation of unresolved problems arising from human-determined paths of development.

To operationalise AADMER and translate its spirit and intent into concrete terms, a Work Programme for 2010 to 2015 has been developed and is currently being implemented. Under the Prevention and Mitigation component of the AADMER Work Programme, mainstreaming DRR in the education and health sectors of ASEAN Member States is identified as a means to reduce people's vulnerability to disasters. Mainstreaming DRR in key sectors of development such as education is an established approach that considers risk reduction as an integral part of ongoing social and economic development processes rather than as an end in itself.

DRR Mainstreaming is a widely accepted approach to institutionalising disaster risk reduction in key development sectors such as education. This approach means integrating the concepts and fundamentals of disaster risk reduction in lesson plans and into other parts of the school curricula towards enhancing the learning process and understanding of disaster prevention, mitigation, and preparedness among pupils and students, while they are young. This approach will also build the capacities of teachers and schools in order for them to impart the appropriate information and knowledge to their pupils and students. Developing the appreciation for disaster risk reduction among school children and school teachers will plant the seeds for building a culture of disaster resilience in the region.

The ASEAN Knowledge Sharing Workshop

Realising the importance of mainstreaming DRR in development processes, a two-day regional workshop on Mainstreaming DRR in the Education Sector was held on 18-19 February 2011 at the Melaka International Trade Center (MITC) in Malacca, Malaysia. This workshop primarily aimed to showcase the substantial achievements made by four ASEAN Member States, namely, Cambodia, Indonesia, Lao PDR, and the Philippines, through sharing of good practices, lessons learned, and outstanding processes that may be used as standards that are adaptable to the region and in other parts of the world as well.

With this workshop on mainstreaming DRR in education, particularly in the curriculum of primary and secondary schools, it is envisioned that integration of disaster risk reduction in the school curricula and learning materials will be scaled up in the region, given the varying levels of experience and expertise in this area. The lessons learned and good practices gained from various experiences of ASEAN Member States in terms of DRR mainstreaming process will provide a solid basis for replication and up scaling.

Workshop Participation

The two-day workshop was attended by over 150 participants on the first day, and around 40 on the second day in the small group workshops, comprising of representatives from the NDMOs and education ministries of ASEAN Member States.

Among distinguished guests in attendance were Dr. Khair bin Mohamad Yusof, Deputy Director General, Policy and Education Development Sector, of the Ministry of Education of Malaysia; Ms. Helena Molin-Valdes, Deputy Director, United Nations International Strategy for Disaster Reduction; and H.E. Dato' Misran Karmain, Deputy Secretary-General of the ASEAN Socio-Cultural Community.

OPENING ACTIVITIES and OVERVIEW

Opening Remarks

In his remarks, Dr. Khair bin Mohamad Yusof, Deputy Director General of the Policy and Education Development Sector, Ministry of Education of Malaysia, talked about Malaysia's commitment to building schools that are safe. He explained about the 3K Committee, a multi-agency committee chaired by the Deputy Minister of Education whose role is to coordinate approaches to cleanliness, health, and safety in schools and the special committee under the Ministry of Education that is tasked to help schools prepare for disasters.

Ms. Helena Molin Valdes, Deputy Director of the UNISDR, in her remarks, emphasised that change starts by educating the new generation about disaster risk reduction because "prevention is better than cure". She further highlighted the goals of the Hyogo Framework of Action (HFA) in which education is one of the priority areas. She reported that less than one third of the countries are successful in mainstreaming DRR in the education sector so more efforts need to be given in this area. She highlighted the need to not only study environmental phenomena, but the disasters that could come out of them, and emphasised the importance of raising awareness and ensuring the safety of school buildings.

Ms. Ronilda Co, Project Manager of the Asian Disaster Preparedness Center, explained ADPC's history of working on mainstreaming DRR in education, and how it is driven by ASEAN Member States, plus 16 other countries through another inter-

governmental mechanism called the Regional Consultative Committee (RCC). She stated that the RCC has adopted as a priority, the mainstreaming of DRR in the fields of agriculture, infrastructure, environment and education. Ms Co reaffirmed ADPC's commitment to ASEAN Member States in supporting its efforts in mainstreaming of DRR in education.

In his remarks, H.E. Dato' Misran Karmain, Deputy Secretary-General for the ASEAN Socio-Cultural Community, talked about ASEAN's commitment in building safer schools through the "Safe Schools and Hospitals Campaign" which responds to ASEAN's quest towards its vision of "Building disaster resilient nations and safer communities by 2015." He said that ASEAN is committed to increasing resilience to hazards and in shifting its disaster relief perspective to that of DRR as an enabling practice. He further stated that the ASEAN is supporting the campaign "My City is Getting Ready", which promotes disaster preparedness in cities. He also mentioned that these campaigns are fully aligned to, and synergise with the Work Programme of the ASEAN Agreement on Disaster Management and Emergency Response or AADMER. He then urged both the education and disaster management sectors to work together so that minimum requirements and standards can be established to mainstream DRR in the school curriculum.

Objectives and Structure of the Workshop

Dr. Marqueza Reyes, Disaster Risk Reduction Technical Adviser under the ASEAN-UNISDR Technical Cooperation, explained the Workshop's overview, goals and structure. She cited the AADMER and the HFA, two very important instruments, and its relevance to the mainstreaming of DRR in the education sector. The HFA has DRR embedded as one of its priority actions. The AADMER, the first HFA related binding agreement in the world, was ratified by ASEAN Member States in 2009 and shows the paradigm shift of ASEAN's regional policy from disaster relief towards DRR. She noted how AADMER has been translated from policy to a concrete work programme, and is now implemented in four components, one of which is Prevention and Mitigation where this Workshop falls under. The Workshop's goal, according to Dr. Reyes, was to focus on building the capacity of Member States in mainstreaming DRR in education, which can be achieved by facilitating vertical and horizontal coordination between the NDMO and the education sector. Another objective was to learn from participants good practices based on their experiences. This would enable each Member State to assess where they were in terms of DRR mainstreaming. Dr. Reyes explained that the goal was also to assess the state of mainstreaming DRR in education across the region, particularly in determining performance areas of DRR mainstreaming in the school curriculum. The expected output was a documentation of good practices and a guide in mainstreaming DRR in school curriculum that is adaptable to the ASEAN region.



Workshop
participants

KNOWLEDGE SHARING ON MAINSTREAMING DRR IN SCHOOL CURRICULUM

Plenary Session 1: Briefing on the Status of DRR in Education in ASEAN Member States

MALAYSIA

Dr. Khair bin Mohamad Yusof, Deputy Director General of the Ministry of Education, emphasised the importance of safety in schools and to develop a culture of safety in schools. He stressed the importance of understanding what safety standards or measures are and knowing when these should be applied, especially in managing school facilities and in handling the behavior of people. Dr. Khair explained that pilot schools in Malaysia have done a self-assessment to assess their own safety. Based on this self-assessment, the Ministry of Education (MOE) would know what action and projects to undertake to help schools become safe. Schools with assessment scores of 50-79 percent would require capacity building, while those scoring below 50 percent will be given special focus to ensure it passes the standards of safety. Dr. Khair said that Malaysia aims at expanding its Safe School Standard and would continue to focus not only in addressing disasters but also in ensuring and investing on the safety of school facilities.

SINGAPORE

Mr. Lim Chen Chye, Assistant Director for Operations and Training of the Ministry of Education in Singapore, explained that because Singapore is not vulnerable to natural disasters, and man-made disasters have been minimal, disasters seem to be an inconsequential concern among the Singapore citizens, and changing the current consciousness remains a challenge in Singapore. In spite of this, Mr. Lim highlighted that the country has established a School Emergency Organisation (SEO) in every school, headed by the Principal with different groups and structures to take care of various needs during an emergencies such as health and psycho-social support. Singapore activated the SEO during the H1N1 outbreak in 2009. Singapore also organises full-scale exercises to engage children in role-playing emergency scenarios. The SEO is able to help teachers and students become familiar with disaster issues. In schools, DRR is taught as part of the Social Studies and CME subjects, with emphasis on promoting vigilance as a key value. There are scenario - and hazard-based lesson guides for teachers. Singapore schools also hold full-scale preparedness exercises (emergency procedure exercise, drills, etc) which involves the participation of the whole school community. There are also efforts to mainstream DRR outside the curriculum through programmes like the Community Emergency Preparedness Programme (CEPP) and the SMRT Community Emergency Preparedness (SCEP) Programme. CEPP is a programme by the Singapore Civil Defense Force that provides both theory and practical training on emergency preparedness for school students and the public. It comprises of 5 modules covering Basic First Aid, One-Man Cardio-Pulmonary Resuscitation (CPR) & Automated External Defibrillator (AED), Fire Safety & Casualty Evacuation, Emergency Procedures and Unconventional Threats. SCEP is a public awareness and education programme designed to encourage and train communities to play a more active and effective role in enhancing safety and encouraging students to share ownership of security.

MYANMAR

Ms. Kyu Kyu Shwe, Assistant Director of the Ministry of Education in Myanmar explained that after Cyclone Nargis, which heavily damaged 60 percent of schools in affected areas, Myanmar developed the Myanmar Action Plan on Disaster Risk Reduction (MAPDRR) which has identified the Mainstreaming of DRR in Education as an important initiative. The Ministry of Education also established the Education Cluster, and the Disaster Preparedness and Response Education Group (DPRE), a multi-agency group that spear-headed the distribution of Educational Resource Packs to schools in 10 townships all over Myanmar. The Resource Packs included information on risk assessment, individual school disaster management plans, drills, teaching and learning materials and materials for recovery support, and was used in the training of principals and teachers/trainors. Another initiative, the UNESCO Myanmar Education Recovery Programme (MERP), developed HFA-based DRR training modules, teaching aids, and learning materials for schools, including a glossary of concepts and definitions of DRR which were used to train teachers to implement them. After Cyclone Nargis, schools became temporary shelters for affected communities, and Ms. Shwe explained that this has also brought attention to the importance of practicing safer school construction guidelines in reconstruction.

THAILAND

Ms. Sararat Leepaiboon, Education Official from the Thailand Ministry of Education explained that Thailand applies a national curriculum on disaster education. Hazard-specific textbooks and teachers' guide on landslide, flood and tsunami were developed for the primary to lower secondary level through collaboration with international agencies such as JICA and focuses on disaster knowledge, recovery, preparedness and evacuation. Children are also taught hazard mapping. There is a teacher training programme in DRR and emergency response and teachers are encouraged to formulate DRR action plans that can be applied in their particular school. Thailand's future plans for disaster education in schools include the provision of guideline documents, promotion of implementation of DM in all schools, and promotion of integrating disaster preparedness programmes in school activities. Ms. Leepaiboon cited that a continued partnership exists among organisations such as the Thailand DDPM, JICA and ADRC to promote educational activities, to conduct hazard mapping and drills, and to develop more textbooks for disaster preparedness. There is also a plan to establish a learning center for disaster education in the country.

VIET NAM

Ms. Nguyen Thi Thuy Lieu, Deputy Chief, Department of Dyke Management, Flood and Storm Control said that Viet Nam has been implementing projects that contribute in raising DRR awareness among children, where they have learned how to prepare risk maps and interview adults to look for possible evacuation areas; how to protect themselves from drowning; how to help other children; how to assist in rescue; and how to advocate and propagandise disaster preparedness in the community. Despite these efforts, one of the major and current challenges in Viet Nam is that disaster risk reduction has not yet been incorporated in the school curriculum. Vietnam's National Strategy for Natural Disaster Prevention, Response and Mitigation 2020, however, has identified priority action plans to ensure the allocation of state budget for disaster programmes including the continuous campaign to raise disaster awareness in schools and other areas. This includes the integration of disaster knowledge into school programmes by 2011.

SUMMARY OF PLENARY SESSION 1

Dr. Marqueza Reyes gave a brief summary of Plenary Session 1 by way of highlighting the commonalities in the DRR experiences of ASEAN's Member States. She noted how in some countries, DRR mainstreaming in the education curriculum has been progressive, but remains difficult in others. Some countries in the region focus more on developing instructional materials, while a few are more devoted in nurturing strategies that train teachers. Noting that most projects on mainstreaming are conducted in collaboration with international agencies and organisations, Dr. Reyes ended her summary by emphasising that the continuing challenge in mainstreaming DRR in education is sustainability.

Plenary Session 2: Case Studies on Good Practices in Mainstreaming DRR in School Curriculum

CAMBODIA

Mr. Eng Kimly, Director, Department of Curriculum Development, explained that the Department of Curriculum Development has initiated the Mainstreaming of Disaster Risk Reduction into the Education sector (MDRD-EDU) since 2007 in partnership with the Asian Disaster Preparedness Center (ADPC) and the United Nations Development Programme (UNDP) with support from the European Commission Humanitarian Aid department (ECHO). Through the project, DRR modules for student and teachers at the primary level were developed and integrated with existing subjects like social studies, geography, practical science, etc. Teaching aids, posters and other materials were also produced and training of teachers and teacher trainers were conducted and the programme was piloted in initial 6 schools. Currently, teachers understand well the concepts of preparedness, protection, and emergency relief measures and students are found to be equipped with acceptable understanding as evidenced by changes in attitude and practices towards DRR. The students were also able to disseminate DRR knowledge to their parents and communities. After learning about DRR in the classroom setting, both teachers and students are able to share their understanding to others (schools, villages and communities). Collaboration with other stakeholders in producing education materials on DRR concepts and measures are done to scale up coverage in the country.

LAO PDR

Mr. Thipphamonh Chanthalangsy, Head of Education Construction Design and Management, Ministry of Education explained that since 2002, DRR has been integrated in the primary school curriculum in Lao PDR. This was done through the development of textbooks and teacher's guide, training of teachers on teaching DRR and piloting the programme in target schools in the country. From 2007, DRR mainstreaming was implemented under the Regional Consultative Committee (RCC) Programme on Mainstreaming DRR into Development Policy, Planning and Implementation. From 2008, the DRR modules prepared in 2002-2004 have been institutionalised into selected secondary grade subjects of the national curriculum and teachers training system. Specifically, hazard specific DRR materials were developed for the lower secondary level. Teaching aids, posters and other materials were developed as well. Lao PDR follows the process in DRR curriculum design and instructional materials development, which includes steps on planning, writing, review, teacher training, implementation and monitoring and evaluation. Student knowledge is tested through tests, projects and other activities. Mr. Thipphamonh explained that the mainstreaming process has helped build the capacities of teachers, teacher-trainers, and schools to impart DRR information and knowledge; and has helped plant the seed for building a culture of disaster resilience in the country. He mentioned that having a valuable planning document and the close coordination between MOE and NDMO has contributed to the success of the mainstreaming process.

INDONESIA

Ms. Diah Harianti, Head of Curriculum Development Center, Ministry of National Education, explained that there is a National Strategy for Disaster Risk Reduction Mainstreaming in School System developed by the ministry. The strategy is a national policy that serves as a reference and guidance to mainstream DRR into the education system in Indonesia. One key aspect of the strategy is to integrate DRR into the formal education curriculum and into both intra- and extra-curricular activities. Imbued in this strategy is the child rights-based approach which dictates that every child deserves to get security and a good education. In Indonesia, DRR can be taught Local Content Curriculum (LCC) or school-based curriculum integration. LCC allows for special subjects to be taught based on local needs and potential. If there are schools in high risk areas, they have the flexibility to develop their own curriculum on DRR based on their need and an analysis of local conditions. DRR can be also taught through extra-curricular activities. DRR is also taught or integrated in subject matters. Indonesia has also developed a module for integrating DRR into curriculum from elementary to secondary level focused on flood, fire, volcano, tsunami, earthquake and on the phases of disaster (before, during and after). Indonesia has also developed several modules for integrating DRR into curriculum from elementary to secondary levels focused on specific hazards such as flood, fire, volcano, tsunami, earthquake and on the phases of disaster (before, during and after). These are meant to be used as references by teachers, so teachers can modify the modules to suit the needs of their respective schools.

PHILIPPINES

Dr. Corazon Lamadrid-Echano, Department of Education (DepEd) consultant on DRR, climate change, and consumer education, explained that the Philippines recently passed a new law called the "Philippine Disaster Risk Reduction and Management (PDRRM) Act of 2010" which now gives an important focus on disaster prevention and risk reduction, which outlines support for the mainstreaming of DRR in education. In the Philippines the concept of safe schools are enabled through a structural and a non-structural or curriculum component. For the non-structural component, DRR is integrated into existing subjects, and the curriculum and other instructional materials developed are expert and field validated prior to being implementation. The Department of Education has also required school regional and division heads to designate permanent focal persons / coordinators to be in charge of DRR, Climate Change Programmes and Environmental Education. These coordinators are being trained through coordination with NGOs who are helping roll out the programme all over the country. DRR is also integrated in alternative learning programmes for out-of-school youths, and through technical and vocational courses, usually in the fields of agriculture and fishery. The Department of Education has developed a "DRR Resource Manual" for school teachers and administrators that covers both DRR curriculum integration and post-disaster continuity of learning. A memorandum has also been issued to all publishers of educational materials to integrate concepts of DRR and climate change adaptation. There is also a proposal to include a concrete DRR course/subject at the tertiary level teacher/education course. This, in the long run, is envisioned to reduce the costs of post-graduate training in equipping teachers to teach DRR. The development of a "Physical Facilities Manual" for schools ensures that the structural component of the safe school programme is being implemented as well.

DISCUSSION HIGHLIGHTS

A question was raised and was addressed particularly to Indonesia and the Philippines on how these two large countries are able to effectively disseminate all materials and conduct capacity building for all teachers, and if DRR was part of the examination process in these countries.

In the Philippines, the Department of Education annually conducts an assessment for all elementary and secondary levels in which DRR concepts are included in exams for the particular subject it is integrated into. Capacity building or training of teachers is done through a "training of trainers" system and conducted regionally, and cascaded down to the school level. The effectiveness of this system remains a challenge for the Philippines. In Indonesia, the curriculum is school-based. With approved examples from the ministry as guidelines, every school have the opportunity to develop their own curriculum and materials for implementation.

The countries were also asked to elaborate about what good practice on mainstreaming DRR in the education sector would they recommend for the replication or adoption of other Member States.

Indonesia advocated for the school-based curriculum development system. The Philippines explained that developing a uniform or standard resource manual for curriculum development would be best for uniformity of knowledge and understanding, and to encourage sustainability. Cambodia recommends subject integration of DRR in curriculum, as well as having a high quality training for teachers to teach DRR, an idea which Lao PDR also agreed to. In Singapore, integrating DRR in the curriculum remains a challenge.

A question was also raised about how the education sector integrates post-trauma counseling or psycho-social support. In the Philippines, the teachers handling health and nutrition responds to the psycho-social needs for students during disasters. In Malaysia, there is an organisation of school counselors who help support and minimise trauma in children when disasters happen. Singapore has established "care groups" to take care of psycho-social needs of traumatised students and parents after an emergency.

SUMMARY OF PLENARY SESSION 2

Ms. Ronilda Co gave the summary of Plenary Session 2. She pointed out that the four country cases have taken the curriculum as a common entry point in mainstreaming DRR in education. Still, the standards of approval process, pilot testing, evaluation are maintained and are somehow still anchored on national standards. Thus, they are all still competency-based.

Another commonality among the four countries is that no new subject is created to teach DRR concepts. Rather, teaching DRR takes place through the integration of DRR concepts in existing subjects. The challenge therefore in this integration is to maintain existing subjects without altering its traditional description.

There is also a focus on teacher training as a method which is done to upscale the skills of teachers but there is difficulty in ensuring high quality of training.

Ms. Co ended the session by stating that whatever the entry point is in mainstreaming DRR in education, the problem of sustainability is underscored. It is important to determine the elements that could help sustain these practices in the countries' respective ministries.



**Ms. Helena Molin Valdes of UNISDR
during her opening remarks**

BENCHMARKING DRR MAINSTREAMING IN SCHOOL CURRICULUM IN THE ASEAN REGION

Dr. Marqueza Reyes welcomed the participants to Day 2 of the Workshop which has the overarching theme of “Benchmarking DRR Mainstreaming in School Curriculum in the ASEAN Region”. She explained that the participants would be divided into two groups for easier facilitation. Group 1 was composed of representatives from the countries of Cambodia, Indonesia, Malaysia, Singapore, and Thailand. Group 2 was composed of representatives from the countries of Lao PDR, Myanmar, Malaysia, the Philippines, and Viet Nam. The workshop results are collated per country as shown in the following tables:

Performance Area	CAMBODIA
Political Commitment	Prime Minister's office / National Disaster Management Councils. Prime Minister and various ministers are involved. NDMOs enters into MOU with MOE.
Legal and Regulatory Systems	There is a draft law on DM that may be passed by 2012. Multi-agency prepared SNAP already exists which annually provides for a project for mainstreaming DRR in education.
Policy	Standard operation plans; Ministry policies.
Strategy	Subject-based strategy for DRR in schools. Choosing these subjects are based on an analysis of competencies.
Formal Curriculum	Follows the curriculum review process for DRR mainstreaming in schools. Cambodia has one guideline for integrating DRR topics for teacher training.
Instructional Materials Development	Has published a textbook of geography in which DRR is heavily integrated for grade 8, including teacher's guide and exercise book for students as well as teaching aids (flipchart, booklets, posters, etc). Other DRR integrated subject textbooks are available for primary school level (grades 4,5,6) and other primary levels are currently under development. Integrated started in grade 8 because there are more opportunities to integrate on subject level.
Teacher Training and Professional Development	Practices in-service and pre-service training for all teachers. Cambodia has one guideline for integrating DRR topics for teacher training.
Monitoring and Evaluation	Has a system to provide questionnaires for student rating (two provinces and six schools near Tonle Sap and Mekong). One notable finding of the practice is that females are found to be more knowledgeable in DRR – but it was found that this is because males attend less classes. M&E applied for curriculum, and now has plans to revise their curriculum.

Performance Area	LAO PDR
Political Commitment	Lao PDR's political commitment in mainstreaming DRR in education is manifested by the establishment of its National Disaster Management Council or NDMC, According to its Ministry of Education Representatives. NDMC has a framework for coordination that is followed by the ministry for policy management. The MoE representatives also said that in terms of influences, AADMER was one of the main factors that helped facilitate the mainstreaming of DRR in Lao PDR.
Policy	The policy of integrating disaster concepts in Lao PDR curriculum design is based on the guidelines of the National Disaster Management Strategies. Subjects where concepts are integrated include Natural Science and Social Science. The MoE representatives said that these subjects are normally introduced from grade levels 6 to 8.
Strategy	The decision on what level to start integration at and on which subject comes from the general education and secondary school department. Lao education system allows for a 20 percent adjustment in curriculum design, according to the representatives. This practice makes the curriculum highly localised and contributes in engaging the local partners to insert the needed adjustment to make the design more adaptive to local needs. Local partners include community members and teachers, among others. The representatives added that despite NGO help in enabling them to work on their strategies, one of the challenges in implementing strategies in mainstreaming DRR in the Lao education system is in the lack of budget allocation from the government.
Formal Curriculum	Follows the curriculum review process for DRR mainstreaming in schools. Cambodia has a guideline for integrating DRR topics for teacher training.

Performance Area	INDONESIA
Legal and Regulatory Systems	There is an existing DM Law, under which there are strategies for including DRR mainstreaming in education.
Policy	Standard operation plans; Ministry policies
Strategy	Development of new subjects on DRR (Local Content Curriculum)
Formal Curriculum	Curriculum samples are given to schools for their own integration, and must undergo evaluation or competency review
Instructional Materials Development	With NGO support, DRR modules are being developed for primary to secondary level, with preparedness information for every phase of disaster. Local context is the basis and schools can decide to adopt the modules.
Teacher Training and Professional Development	New modules and training for teachers to use the module are included in one package.

Performance Area	VIET NAM
Policy	Viet Nam's National Strategy for Natural Disaster Prevention, Response and Mitigation to 2010 lists community awareness and integration of disaster knowledge into the school curriculum as a high priority programme.
Strategy	Subject-based strategy for DRR in schools.
Formal Curriculum	Key concepts and simple guidelines for main types of hazards are incorporated in Popular Science (primary level) and Geography (Elementary level). Related knowledge in disaster will be included in the school curriculum after the strategy for DRR in education from the Ministry of Education and Training is approved.
Instructional Materials Development	The Guidebook for Flood and Storm Control is published and disseminated nationwide to ministries, provinces and districts. It is also used as training material for community level, and DRR related posters and leaflets are used for extra-curricular activities in schools.

Performance Area	MALAYSIA
Legal and Regulatory Systems	According to its representatives, although Malaysia does not have any clear policies directed towards mainstreaming DRR in its education system, the Ministry of Housing has a law that includes house building specifications which can be seen as part of the country's disaster management efforts.
Policy	Even with the lack of clear policy on DRR mainstreaming, Malaysian representatives mentioned that in case of emergencies, they are ready to take the necessary action to help affected individuals. This is partly due to the inclusion of emergency-related practices in school, which are coordinated with co-curricular activities and engage the participation of Boy scouts, the police, and fire brigades.
Institutional Mechanisms and Structures	District and state level committees within the Ministry of Education to act during emergencies.
Formal Curriculum	DRR is integrated through activities like debates, etc. Curriculum is centrally developed. A new one is just developed and includes standards on safety. Teachers are always reminded to integrate DRR in subjects especially when there are disaster issues. DRR is integrated in every subject mainly to create awareness.
Instructional Materials Development	Teaching aids on DRR are developed and championed by school counselors.

Performance Area	MYANMAR
Political Commitment	Myanmar's NDPCC was founded after the Indian Ocean Tsunami, and is chaired by the country's Prime Minister. One of NDPCC's main components is to raise public awareness among the people. As for the implementation of this strategy, Myanmar's MoE representatives said it was AADMER that helped facilitate this.
Policy	Myanmar representatives cited that there is no existing ministry order that is meant to mainstream DRR practices in its education system, but there is a standing order to do so from the national government. The integration of DRR concepts particularly takes place between grade levels 6-11 in subjects that include General Science, Geography and English. Myanmar also has Safe School Construction Policy and Guidelines approved by the MoE. This, along with central committees and the NDPCC, helps the government identify education as one sector to mainstream DRR.
Strategy	Subject-based strategy for DRR in schools.
Teacher Training and Professional Development	The Myanmar representatives said that all of their teachers, local staff and relevant departmental staff have specified DM training course. The training of the teachers come from various sectors, including RRD and the MoE. Myanmar is moving towards attaining sustainability by way of considering the integration of said DM training course in the usual teacher training system.
Monitoring and Evaluation	In Myanmar, participation of international organisations such as UNESCO and UNICEF contributes in the monitoring and evaluation of DRR mainstreaming process. UNESCO for instance, visits schools to conduct monitoring after a month of training. It also helps in the development of an assessment tool and set of questionnaires to ensure better evaluation of the curriculum, outcomes and development of materials on mainstreaming DRR.

Performance Area	PHILIPPINES
Political Commitment	In the Philippines, one of the contributing elements that facilitated the mainstreaming of DRR in education as a government priority was the paradigm shift in its disaster response. From its focus on implementing humanitarian efforts in times of crises, there was a demand to be more pro-active and to have the country's Department of Education (DepEd) play a vital role in advancing DRR practices in the education system. Being susceptible to numerous natural disasters all year round, the impact of disasters on economic activities cannot be underestimated.
Legal and Regulatory Systems	According to representatives from the DepEd and Office of the Civil Defense (OCD), one manifestation of the Philippines' commitment on mainstreaming DRR in education is anchored in Republic Act 10121 or DRM Act of 2010. This national legislation includes the participation of various sectors including local communities and the education sector.
Policy	Corollary to the goals of the HFA, the Philippines' DepEd has issued department order or DO #55 in 2007 which is Prioritising Mainstreaming of DRR in Public School System. The Philippine representatives said that DO #55 provide teachers the legal basis needed for implementing DRR mainstreaming. The DepEd also came out with a list of uniform practices through the development of Resource Manual and Training Officials. This manual is the department's response to the need for instructional materials which teachers can follow.
Strategy	The Philippines maintain the practice of integrating DRR concepts in education by determining natural points of entry in existing subjects. There are no specific points of entry to integrate particular topics as part enrichment lessons. They employ the use of worksheets or exemplars. The Philippine criteria in determining the point of entry for integration remains competency-based. There is a given list of competencies determined by the school curriculum committee. In line with this, the committee first develops core messages about DRR, followed by the development of key concepts, and lastly the development of the module. The committee agrees which hazards become part of the content. The DepEd then develops the exemplar.
Formal Curriculum	Follows the curriculum review process for DRR mainstreaming in schools.
Instructional Materials Development	Budgetary constraints remain one of the challenges in implementing DRR strategies. Printing of DRR materials is hindered by lack of funds. Allocation of budget prioritises recovery, reconstruction, and rehabilitation more, not DRR. The focus remains on quick response in times of disasters.
Teacher Training and Professional Development	In-service training adds subjects to those already taking teaching courses. This reduces the costs normally entailed in conducting training and helps teachers be equipped in teaching DRR concepts early on. There is a new proposal for cooperation which would foster a partnership between the barangay officials and DepEd, especially when having drills. This is seen as a less costly effort to further enhance the capabilities of teachers with regard to DRR concepts. This is further seen as a move towards developing more sustainable programmes in training teachers on how to mainstream DRR in education.

Performance Area	SINGAPORE
Legal and Regulatory Systems	Currently no law on DRR, but has a coordinating ministry that prioritises crisis / emergency management (emergency preparedness – making sure crisis does not happen). Every ministry can set up a strategic plan in which “safe and secure environment” strategies (structural safety in buildings, schools, etc) are embedded.
Policy	Standard operating procedures; Ministry policies.
Strategy	Subject-based strategy for DRR in schools. Singapore has a structured process on curriculum development.
Teacher Training and Professional Development	Newly promoted vice principals / principals have to undergo an induction course/training.
Monitoring and Evaluation	Has a continuous curriculum development and improvement process. Monitoring process is in place.

Performance Area	THAILAND
Political Commitment	Prime Minister’s office / National Disaster Management Council are involved. NDMOs enters into MOU with MOE.
Legal and Regulatory Systems	There is no law but there are guidelines issued by the Ministry of Education for DRR mainstreaming in school policy and curriculum.
Policy	Ministry policies
Strategy	Subject-based strategy for DRR in schools. Choosing these subjects are based on an analysis of competencies.
Institutional Mechanisms and Structures	Community is represented in the committee that implements preparation of DRR activities in all schools.
Formal Curriculum	Curriculum adaptation and review of DRR may be school based.
Instructional Materials Development	Textbook on DRR is developed (content) by teachers (guidelines are provided for teachers – template and format) and are area specific.
Teacher Training and Professional Development	JICA and ADRC help in teacher training and professional development but MOE trains teacher to produce their own materials. TOT is also applied.

CLOSING REMARKS

Dr. Marqueza Reyes presented a summary of the Workshop conducted. She summed up the good practices identified by each country in every performance area of mainstreaming DRR in education. She also mentioned that a publication on mainstreaming DRR in school curriculum will be produced as a result of the Workshop, and will include good practices in identified performance areas to help Member States in their respective initiatives in upscaling their efforts and for possible replication and adaptation by others. She also expressed her thanks to the Government of Malaysia, UNISDR, ADPC, ASEAN Secretariat, the resource persons, and the participants for their active participation in the Workshop.

Dr. Khair bin Mohamad Yusof, Deputy Director General of the Ministry of Education of Malaysia also expressed his thanks to all the participants who attended the Workshop.

Annex 3

ASEAN Knowledge Sharing Workshop on Mainstreaming Disaster Risk Reduction in Education

18-19 February 2011, Melaka International Trade Center, Malacca, Malaysia

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Annex 4

Technical Working Groups

A project Technical Working Group (TWG) was formed at the beginning of the ADPC-UNDP-ECHO Mainstreaming DRR in Education Project in Cambodia, Lao PDR, and Philippines. The TWGs consist of curriculum specialists, lessons plan writers, and education specialists from MOE, and DRR specialists from NDMO, and other related government agencies.

Philippines	Cambodia	Lao PDR
<ul style="list-style-type: none"> • DepEd Office of the Undersecretary for Teachers' Welfare (Lead) • Bureau of Secondary and Elementary Education, DepEd (Chair) • Philippine Institute of Volcanology and Seismology (PHIVOLCS), Department of Science and Technology (DOST) • Philippine Atmospheric, Geophysical and Astronomical Services (PAGASA), DOST • Bureau of Alternative Learning System, DepEd • National Mapping and Resources Information Authority (NAMRIA), Department of Environment and Natural Resources (DENR) • Physical Facilities and Schools Engineering Division, DepEd • Mines and Geosciences Bureau, DENR • Basic Education Support and Reform Agenda (BESRA) Secretariat, DepEd • Office of the Presidential Advisor on Climate Change (OPACC) • National Economic Development Authority (NEDA) • Department of Public Works and Highways (DPWH) • Department of Finance (DoF), DepEd • Philippine Information Agency (PIA) • NDCC – OCD • ADPC 	<ul style="list-style-type: none"> • Under-Secretary of State, MoEYS (Lead) • Director (Focal Point), Department of Curriculum Development, MoEYS (Chair) • National Teachers Training Institute, MoEYS • Department of Secondary Education, MoEYS • Department of Construction, MoEYS • National Committee on Disaster Management (NCDM) • ADPC 	<ul style="list-style-type: none"> • MOE, Cabinet Level: Director; (Lead) • Focal Person Department of General Education, MOE (Chair) • National Research Institute for Educational Science (NRIES), MOE • Department of Teacher Training, MOE • Department of Finance, Division of Design and Construction Management, MOE • National Disaster Management Office (NDMO), Ministry of Labour and Social Welfare • ADPC

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ASEAN - UNISDR Technical Cooperation for the Implementation of the HFA

The cooperation between the ASEAN and United Nations International Strategy for Disaster Reduction (UNISDR) aims to provide technical assistance and expertise in the execution of disaster risk reduction (DRR) components of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) and the strategic implementation of the Hyogo Framework for Action (HFA) in the ASEAN Region. These include developing capacities for Disaster Risk Reduction and addressing emerging gaps in the DRR programmes and strategies of the ASEAN Committee on Disaster Management (ACDM) and ASEAN Member States as well as facilitating coherence of regional and national programmes and efforts for the accomplishment of the HFA Priorities for Action. The overall goal of the technical support is the achievement of the vision of disaster resilient nations and safer communities by year 2015. For more information, please contact marqueza.lepana@asean.org