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## EUROPEAN AND MEDITERRANEAN WORKSHOP

### DISASTER REDUCTION AT SCHOOL *"Building safer school communities"*

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Paphos (Cyprus) 29 -30 October 2007

## ABSTRACT OF PRESENTATIONS



## **Session 1**

### **Ensuring safety of schools**

## **Better perception of risks to prepare schools for major accidents**

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In the wake of the storms in 1999, the French Observatory for Security in Schools started to work on the major hazards which schools might face and on preparing the educational community to cope with unexpected or unforeseeable crisis situations. The explosion at the AZF plant in Toulouse in 2001, which seriously affected schools and universities, caused awareness-raising measures to be stepped up, particularly with the introduction of the specific safety plans which are now mandatory for all educational establishments.

Awareness of exceptional hazards varies considerably, but significant advances have already been made. We need to increase our efforts, but also to move on to a further stage: we must help teachers and other education staff, pupils, students and parents take a more proactive approach to the need for protection against a whole series of potential dangers which are much more serious than in the past.

### **1. The new outlook for risks**

Just as the great fires prompted improvements to safety regulations in their day, the latest major accidents to schools have caused substantial changes in attitude. In particular, the 1999 storms that damaged almost 5,500 schools highlighted the need to draw up protection plans which no longer bore any relation to standard fire evacuation drill. When a school cannot be closed in adequate safety because there has been insufficient forecasting or warning has come too late, a protection plan must be carried out to cope with the disaster situation as well as circumstances permit. An event of this kind means that decisions have to be taken very fast.

Crisis situations can arise at any time when sudden local tornados are liable to tear roofs off or cause ceilings to collapse. At such times the school community cannot simply apply the rules. Preparations must be made at regular intervals and care must be taken to involve parents so as to reduce panic reactions. This would prevent many of the phone calls which pointlessly jam the lines instead of leaving them free for the emergency services. The outside emergency plan is a matter for the *préfectures* and municipal authorities, but over the past few years head teachers have realised more fully that it is for them to deal with the crisis inside the school.

The explosion in Toulouse on 21 September 2001 completely wrecked several secondary schools and injured many pupils and students. People have certainly not forgotten that all the communication networks were immediately destroyed and that those in charge had to cope with an unexpected crisis entirely on their own. In particular, it was realised that theoretical preparation for specific hazards was inadequate. People must be trained to deal with unforeseeable situations. Both pupils and staff must therefore acquire basic reflexes that will prevent disorderly behaviour by individuals and groups, controlling panic while avoiding both overreaction and underreaction.

The subject of major natural and technological hazards has been included in school curricula for several years, but this is not enough. We must help the school community to realise that any establishment accommodating children is a highly vulnerable entity. Preparedness to deal with internal hazards (eg fire and various accidents) has progressed, but the same cannot be said of external hazards.

## 2. The new approaches and skills required

Over and above the actual capacity to anticipate, the first quality that both area education authorities and head teachers need for crisis management is the ability to understand the situation. In most cases they will not be required to apply rules they have learnt, but to be able to adapt at once and improvise without panicking.

This presupposes an excellent knowledge of the buildings, their immediate surroundings and their occupants, and a precise grasp of the resources immediately available for use. In crisis situations those in charge cannot simply behave as usual and must distance themselves from responses that would work in normal circumstances.

Education authorities and head teachers do not have prime responsibility for all response and intervention phases, but they need to have a good knowledge of the mobilisation and intervention mechanisms so as not to hamper them. They must also know how to coordinate the internal resources at their disposal. They must, for instance, be fully aware of the different intervention phases, including the emergency assistance and first aid to victims provided by the fire brigade and ambulance service, shelter operations, and coordination with the public security services under the authority of the *préfet*. There is also the important issue of information and communication from the very outset of the crisis.

In very practical terms, when a school is suddenly faced with a drastic situation, there must be tried and tested instructions for calling the emergency services, providing first aid to the injured and grouping people in less hazardous areas. Supervising pupils is then of cardinal importance both in protecting them from falling materials or intoxication and in alleviating their anxiety.

The introduction of specific safety plans is therefore a prerequisite for coping with even completely unexpected situations. They ensure that the first steps are taken to reduce risks to a minimum pending arrival of the emergency services.

When crisis situations arise, it is important to know how to respond to them swiftly and coherently. It is essential to be capable of working in a network, at high speed, with a range of players including the media, on serious and rapidly changing situations. The best way to prepare people to cope with such emergencies is to avoid long theoretical lectures and launch directly into group work based on actual experience, analysing successes and failures and simulating practical situations. The idea is to speedily identify the pathological states that take hold of a group, to design relevant organisational arrangements, to define the basic actions required and to prepare oneself to adopt appropriate attitudes.

To sum up, the emphasis must be on the need to combine theoretical training with specific preparations for each school, involving teachers, pupils and parents. If preparedness is to be effective, it must be checked by means of regular training exercises. That is the way to practise a living safety culture as part of a broader policy of educating people to assume responsibility.

## **Towards more resilient educational buildings: lessons learned and seismic risk mitigation strategies**

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EUR-OPA Major Hazard Agreement (MHA) member states<sup>1</sup> are, with no exception, situated in disaster prone regions, thus exposed to adverse effects of primarily natural (earthquakes, floods, wildfires, landslides, avalanches, and other hazards of lower socioeconomic relevance) and man-made hazards. Some of hazards are localized and seasonal (wildfires, floods, landslides, avalanches), whereas others are incidental and widespread (earthquakes). The past disasters' empirical record indicates that, although rare, the earthquake effects expressed in terms of physical and functional damages as well as human casualty, in many cases had substantially exceeded the adverse effects of all other hazards individually, but in some cases even the aggregate effects.

Comparing to the number of buildings constituting national residential building stocks, the education process, as a part of national public lifeline, is organized in a rather limited number of highly occupied school buildings, housing the weakest population – the children. Depending on the age of the nation, these buildings, in one or two shifts (quite seldom three), accommodate in total 12-20% of the population<sup>2</sup>, mostly the younger generation on which the future of community depends.

There are hardly any reports of major disasters that do not refer to some damage to essential public facilities such as schools and/or hospitals. Moreover, the last decade earthquake data indicate that, while a fraction of the existing buildings suffered severe earthquake damage, the remaining portion has not created any life-safety hazard. Unfortunately, the buildings, which suffered from earthquakes, were mostly the governmental buildings, especially the school buildings, dormitories and, in some cases, the health care buildings/facilities.

Macedonia has not been and is not an exception. As a result of the quite unfavorable school building typology still existing in Macedonia, there is an imminent and high potential for receiving substantial physical damage accompanied by significant casualty. Even the earthquakes with low to moderate intensities can cause significant unrest and panic among the teaching staff and pupils, as well as an uncontrolled and unnecessary evacuation of the buildings without real needs; which in turn may result in unexpected injuries.

The existing conditions, particularly the exposure and vulnerability, are result and continuation of the development planning processes which historically seldom accounted directly or indirectly for natural hazards. The seismic exposure of pupils is particularly unfavorable and the present functional and usability state of schools in Republic of Macedonia can make it even worse. Present low economic potential of the country and

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<sup>1</sup> Albania, Algeria, Armenia, Azerbaijan, Belgium, Bulgaria, Croatia, Cyprus, France, Georgia, Greece, Lebanon, Luxembourg, Malta, Moldova, Monaco, Morocco, Portugal, Romania, Russia, San Marino, Spain, Macedonia, Turkey, Ukraine.

<sup>2</sup> The educational process in Macedonia (pre-primary, primary and secondary education) is organized in 1,292 school facilities, which accommodate about 344,393 pupils and 17,849 staff. The total population accommodated by school buildings amounts to 17.81% of the total population of Macedonia estimated at 2,033,964 inhabitants (Census of Population, households and Farm Economies in 1991).

decreased resilience of the economy, forced Macedonia to focus primarily on establishing proper emergency preparedness of the education system to external disaster conditions and develop and assure adequate risk prevention culture, then to afford costly, and in this moment economically unaffordable, engineering prevention and mitigation.

The intended presentation will be focused on discussed strategic issues and policies, structural aspects of earthquake related damages to educational buildings and facilities, as well as experiences of Macedonia that once had to resolve such problems following the 1963 Skopje earthquake that caused enormous damages and destruction to educational buildings and facilities jeopardizing the function of the entire educational system for more than several months.

## **Project on education for responsibility: statutory aspects and common base of knowledge and skills**

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Civil security is part of a comprehensive policy for general protection of the population, ranging from risk prevention through emergency services organisation to rehabilitation after the disaster.

Civil security also relies on ordinary people's commitment and dedication, so it is everyone's concern. Each citizen contributes to it by his or her behaviour. The aim is to be able to count on informed and responsible citizens' behaviour.

The purpose of educating young people about civil security is to achieve this aim by preparing them, in suitable ways, to cope with crisis situations and developing education for responsibility.

### **Statutory provisions**

Parliament has made this mandatory: awareness training for school children is based on Section 5 of the Law of 13 August 2004 modernising civil security, which is part of the Education Code: "As part of their compulsory schooling, all pupils shall be informed about risk prevention and the tasks of the emergency services and shall be taught basic first aid".

A decree and a circular specified the conditions and arrangements for implementing this provision in schools. Based on learning situations rooted in the pupils' day-to-day lives and on local realities in each risk area, this education for responsibility aims to help them develop clear thinking, cautious attitudes, responsible behaviour and mutual support. This will enable them to adopt autonomous and appropriate behaviour, whether proactive or reactive, when the various hazards arise.

On 12 December 2006 a national steering committee was officially set up in the presence of the Minister of Education, a representative of the Ministry of Health and the Director of Civil Defence and Security.

In each education authority area, a steering group set up by the head of education in close co-operation with the *préfets* of the *départements* concerned will endeavour to foster the synergies required to carry out the overall project.

This can be done only step by step, given the large number of pupils to be reached – 12 million out of 63 million inhabitants – and the number of teachers to be trained.

### **The educational project and the common base of knowledge and skills**

Education for responsibility is part of a comprehensive, systemic approach cutting across curriculum subjects and incorporated into individual school plans.

Schools for Sustainable Development (*Etablissements en Démarche de Développement Durable – E3D*) ensure responsible management, with the introduction of projects such as the Specific Safety Plan (*PPMS*) and a discussion of the buildings and of teaching methods partly geared to local realities, which help pupils to understand and act in partnership with local civil security players. This approach covers several subjects and trains pupils to

exercise citizenship at local level, since proximity arouses their interest and offers them scope for practical initiatives.

Furthermore, "Compulsory schooling shall at least ensure that all pupils are able to acquire a common base consisting of knowledge and skills that it is essential to master in order to successfully complete their schooling, pursue their training, plan their personal and occupational future and make a success of their life in society".

The common base is intended as a set of skills consisting of knowledge to be acquired, underpinned by the capacity to put it into practice in a variety of situations, and lifelong attitudes to be developed.

National assessments of these skills will be carried out in primary schools (2<sup>nd</sup> and final years) and lower secondary schools (final year).

Incorporating education for risk prevention in the common base means that by the end of their compulsory schooling pupils will have acquired the knowledge, abilities and attitudes enabling them to understand the different types of hazard – major natural and technological hazards, domestic hazards and health hazards – and respond to them appropriately in terms of prevention and security.

The author has researched the knowledge, abilities and attitudes taught in primary, lower secondary and upper secondary school curricula for the three categories of hazard covered.

The paper will take the example of education for earthquake risk prevention.

## **Conclusion**

The challenge for France is to move towards organising practical work on the ground with pupils, based on a comprehensive approach to knowledge of these hazards, of civil security organisation and of the behaviour to adopt. As a result, we shall be able to rely on informed and responsible citizens, so that civil security really becomes everyone's concern.



## Model Internal emergency plan for school establishments

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Schools may be faced with accidents and disasters originating inside or outside the establishment.

These emergencies can cause very serious damage to persons, property and the environment. Depending on their seriousness and/or scale, they will spark a crisis situation and may require a very substantial deployment of emergency services and staff, or even the use of exceptional resources.

Head teachers and their staff must therefore know what steps to take to ensure the safety and protect the health of school staff and pupils. This means that they must be prepared, so as to be able to handle emergencies swiftly and appropriately.

Each school must therefore draw up its own **internal emergency plan**.

This is an internal document designed to limit the adverse consequences of an emergency situation by determining material and organisational emergency measures suited to the building.

The internal emergency plan must, among other things, answer the following questions:

2. When do we launch the plan inside the school?
3. How do we launch the plan inside the school?
4. What instructions must we apply?
5. Where and how do we shelter the staff and pupils?
6. How do we handle communication with the outside?
7. What are the essential documents?
8. When is the crisis over?

A model internal emergency plan has been drawn up. It answers the above questions and lists fire safety instructions together with specific recommendations for all other emergencies.

The specific instructions currently available are:

- o Sheet 1: Fire instructions
- o Sheet 2: Recommendations for SEVESO alerts
- o Sheet 3: Recommendations for bomb alerts
- o Sheet 4: Recommendations for biological or chemical hazards
- o Sheet 5: Recommendations in the event of dangerous substances being accidentally spilled inside the building
- o Sheet 6: Recommendations for flooding
- o Sheet 7: Recommendations for storms
- o Sheet 8: Recommendations in the event of accidents in transporting dangerous materials or substances
- o Sheet 9: Recommendations for earthquakes
- o Sheet 10: Recommendations for gas leaks inside the building
- o Sheet 11: Recommendations for physical accidents or collapse
- o Sheet 12: Recommendations for chlorine leaks in swimming-pools
- o Sheet 13: Recommendations for food poisoning
- o Sheet 14: Recommendations for influenza pandemics

Instructions in the event of nuclear accidents (internal nuclear emergency plan).

## **Session 2**

### **Building a culture of risk**

## Civil defence at school

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Given the growing number of disasters and disaster victims worldwide, it is more essential than ever to think in terms of prevention and preparedness for emergencies.

In most countries, on the initiative of both governments and governmental and non-governmental organisations, programmes are regularly carried out to inform and educate the population in order to prevent and be prepared for accidents and disasters.

All over the world, the various activities conducted in this area have demonstrated how effective they are: it is now proven and recognised that information and training are the two most effective ways of reducing the number of accidents and limiting the consequences of disasters. It is also acknowledged that the earlier the basic principles of self-protection and responsibility in the face of hazards and disasters are inculcated, the more positive the outcome. Young people – children and adolescents – are the preferred target of information and training campaigns on the subject.

The ICDO therefore welcomes the campaign theme chosen by the ISDR for 2006-2007, "Disaster risk reduction begins at school", and also decided to promote it by focusing on "Civil defence at school" on World Civil Defence Day 2006.

Civil defence services, as public bodies responsible for protecting people, property and the environment across a given country, naturally have an important part to play in the matter. The ICDO, which has for many years been advocating disaster prevention and preparedness measures, intends to provide its member states' civil defence organisations with all the support they need to organise risk prevention activities in schools.

To mark World Civil Defence Day 2006, the ICDO designed and produced several training and information aids for children on the subject of disaster prevention.

All the ICDO member states celebrated this World Day, which afforded an opportunity to compare the different experiments on disaster prevention conducted in schools by national civil defence services.

## **Civil Defence at Schools in Cyprus**

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## **Preventive Education and Training for Disaster Risk Reduction in Schools: the Algerian Experience**

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In Algeria, many of existing schools are masonry reinforced concrete buildings, and most of them are old constructions, which were built without any seismic provisions, and thus present high vulnerability to earthquake loads. Thus, they present a serious threat to school children. In Algeria, more than 103 school buildings were classified as destroyed structure and approximately 753 other were seriously damaged following the May 21<sup>st</sup>, 2003 Boumerdes earthquake. In the other hand, schools and educational institutions were closed in the province of Boumerdes and Eastern part of Algiers, and in the western towns and villages of the province of Tizi-Ouzou. The University of Science and Technology of Houari Boumediene (USTHB), the largest university of the country, located in the district of Bab-Ezzouar in the eastern part of Algiers was also temporarily closed for security, damage assessment and repairs.

The factors explaining the scope of damage to schools can be best understood by considering the period during which they were built. Algeria's schools may be classified into three categories: (1) The first category, which is characterized by a well advanced degradation by ageing and lack of maintenance, was built during the colonization era (1830-1962) and accounts for about 30% of the school building stock, (2) The second category (1962-1981), which was built after independence, under the constraints of a rapidly growing population while also responding to the democratisation of educational opportunity, was designed and built without taking into account seismic risk (there was no seismic building code in Algeria until 1981) and (3) The third category of school building is that built after 1983. These schools were built according to the seismic building code and under technical supervision. Damage suffered by various schools during the last earthquakes are also presented. During the last earthquakes (El Asnam (1980), Chenoua (1989), Beni Chougrane (1994), Ain Temouchent (1996), Boumerdes (2003)), scores of Algerian school buildings have suffered considerable damage.

For those reasons a whole programme of preventive education in northern Algeria schools is being conducted since the September 2003. In this paper, the contents and the method used for the preventive education in terms training both the school children and teachers are presented. The school children in Algeria represent more than a quarter of the whole population in Algeria. They are the most vulnerable group of the civil society; they have a large capacity of learning and transferring their knowledge to their environment.

The Ministry of Education, the Algerian Red Crescent and the Civil Protection as well as the UNICEF are working together in training the school children and teachers across northern Algeria which is most threatened by earthquakes. In the wake of the 2003 Boumerdes earthquakes, several measures are being newly implemented as the upgrade of the Seismic School Building Code, mainstreaming disaster risk reduction in the official curriculum in the schools and also training for measures to take before, during and after the disaster. This research work will attempt to present the Algerian experience in disaster reduction in schools.

## **Risk prevention in schools in the Principality of Monaco**

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The government of Monaco pursues a strict policy on the security of persons and property, with special attention to risk prevention.

The Principality of Monaco is a member of the Council of Europe's EUR-OPA Major Hazards Agreement and takes part in several of its programmes, especially the FORM-OSE programme.

Since 1996, the Directorate of Education, Youth and Sport, in close co-operation with the Monaco fire brigade, has been taking part in this information work by building awareness among schoolchildren, who are "tomorrow's adults", and providing training courses for school staff. The purpose is to instil a culture of security into the 6,000 children and adolescents in Monaco's schools, to prepare schools to cope with emergencies and to inform parents via their children.

We instil a culture of security into young people through school curricula (concept of security and tuition in first aid) and training courses for teaching and non-teaching staff (fire, everyday hazards, major hazards, crisis management).

Schools prepare themselves to deal with emergency situations by drawing up internal organisation plans and conducting regular drills (fire, confinement, earthquakes). Every year a technical committee visits each school and recommends any security-oriented works that may be needed.

As early as 1966, concern about earthquake risks prompted the Principality to incorporate this major hazard into legislation, with the requirement that all new buildings comply with earthquake safety standards.

The media (local press and television channel) also publish/broadcast occasional or regular articles and reports on major hazards in the Principality and remind readers/viewers of the appropriate safety instructions.

Lastly, the Principality has set up an Observatory for Security in Schools and Higher Education Establishments, under the authority of the Government Adviser on Internal Affairs. It comprises representatives of the government departments with responsibility for schools, and its tasks include:

- drawing up a security plan;
- making a diagnosis of security standards in each school;
- validating the Specific Safety Plans;
- offering the government departments concerned technical solutions to improve security standards in existing school buildings and those at the planning stage;

helping to improve the legislation and regulations.

## **Prevention of natural disasters and accidents through the secondary and high education system in the Republic of Bulgaria**

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During the more frequently appeared natural disasters that expanded their usual characteristics – territory, size, origin, regularity, the insufficient preparedness of the population for self-protection became eminent. The main reasons for the casualties include panic and unawareness of the conduct rules in a specific emergency situation.

The training and the practical preparation for disaster protection became a priority of the state policy in the Republic of Bulgaria. In 2005 a Ministry of State Policy for Disasters and Accidents was created and in 2006 the Disaster Protection Act was adopted, which regulates the forming of a specialized National Training Center and Preparation of the Private Sector Directorate with a main goal to train different groups of people.

Different target groups are being trained based on joint projects, developed together with the United Nations Development Program and The Kingdom of the Netherlands – regional governors, mayors, regional and municipal administrations, rescuers from Emergency Rescue Activities Departments, experts from the regional inspectorates of the Ministry of Education and Science, etc.

The efforts of the Ministry of State Policy for Disasters and Accidents are directed to enhancement of the education quality. Since the beginning of 2007, the Ministry of State Policy for Disasters and Accidents has been working on a Project “Prevention of Natural Disasters and Accidents through the Secondary Education System in Bulgaria” in partnership with the United Nations Development Program and Ministry of Education and Science. The project strategy focuses on the elaboration of interactive methodologies for disaster protection training of teachers and the training of experts from the regional inspectorates of the Ministry of Education and Science that will consequently pass on their experience to the tutors. The Ministry of State Policy for Disasters and Accidents works on collaboration of the University rectors regarding planned training on the new methodology for students with a professional qualification “teacher”.

New out-of-class and extra-school forms of training are being applied and the traditional forms, such as the “Mission Rescuer” Exhibition and the workshop for the winners , the school contest “Protection in case of disasters, accidents and catastrophes”, are being developed and expanded. Children’s section to the web site of the Ministry of State Policy for Disasters and Accidents with entertaining and training games is pending publication.

The Ministry of State Policy for Disasters and Accidents developed a new strategy for cooperation with the high schools according to the Disaster Protection Act and the European standards and criteria for disaster protection training.

The aims and goals of the Ministry are a result of its ambition to prepare effectively the population of the Republic of Bulgaria to act appropriately in a real disaster situation.

## **Safety Education in Support of Local Sustainable Development**

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**Earthquake education of school students, teaching and administrative staff in Romania"**

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## **Session 3**

**Raising awareness through new tools**

**« New Media Techniques addressed to pupils »,****Justin SHARPE (United Kingdom)***PhD Candidate: Disaster and Development Centre, University of Northumbria**Teacher: Beal High School*[jesharpe@mac.com](mailto:jesharpe@mac.com)

Although a number of education projects have been carried out in areas of the world perceived to be at risk from natural hazards, those visiting countries as tourists are unaware what to do if faced by a hazard such as an earthquake or tornado for instance. This paper outlines a project carried out with children from schools in the UK that enabled children and youth to become better prepared while also becoming advocates for Disaster Risk Reduction through the production of their own information films.

The methodology of this ongoing project uses a number of new media techniques to *engage* children and youth in Education for Disaster Risk Reduction, which is both *by* and *for* youth. This approach illustrates that children and youth are important *agents of change* with regard to DRR because they are open to new ideas and concepts and will often discuss these with their parents. It is argued that 'learning conversations' in the home also result in a positive impact on the 'protective behaviour' of the family and the wider community as a whole.

## Technological Hazard, Multi-targeted Web Site Concept and Structure

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The modern technology is offering to people electricity, food, entertainments, comfort, but also addition hazard and risk attributed to hazardous materials or technologies, like radioactive or toxic substances, high voltage or pressure.

The hazardous substances are present in communities around the world, mainly in industrial facilities and during its transportation via highways, rail and waterways. Accidents, including fires, explosions and leakages resulting in the release of these substances, can have adverse effects on human health, property and the environment. Human exposure to hazardous substances can cause injury or even death to a large number of people. Unfortunately, Bhopal chemical accident in 1984 <http://www.bhopal.com> and Chernobyl nuclear accident in 1986 <http://www.tesec-int.org/Chernobyl.htm> are demonstrated high risk attributed to hazardous materials (HAZMAT), which have been released into environment.

Human exposure may occur directly through skin or eye contact, inhalation or ingestion of HAZMAT and for radioactive materials even without direct contact, due to distance radiation exposure.

Only knowledge about sources and nature of technological risk is the way for safety. This knowledge has to be submitted on the levels of:

- Industrial and transportation designers
- Operators, inspectors and managers
- University professors and students
- Emergency service, medical doctors and mass-media
- General public and children

All these targeted groups have different levels of perception capability and need different approaches for presentation of knowledge. Internet web site "**Technological Hazard**" is the most suitable tool for dispatching of such knowledge for different targeted groups. This topical web site will have few different levels of specific knowledge presentation for different targeted groups.

**Web Site Structure.** The web site will have two-dimension structure, following the topical dimensions and presentation on different perception levels.

The first level of topical structure has two parts, corresponding to two main types of HAZMAT:

- Toxic chemicals hazard
- Radiation hazard

The second level of topical structure will have following structure:

*Toxic chemicals hazard* - classification, nature of hazard, health effects, sources of chemical hazard, chemical detection, protection measures, regulation, legal basis.

*Radiation hazard* - nature of radioactivity, types of radiation, interaction radiation with matter, radiation sources, natural and artificial radiation, radiation detection, health effects of radiation, regulation, legal basis.

The dimension corresponding to different targeted groups has three levels:

- General public, children
- High education
- Professionals

This web site could be a basis for harmonization of technological hazard education on European level for schools, universities and professional training.

## Teachers using Internet: the BESAFENET project

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The Besafenet project, which was developed by the Agreement's Network of Specialised Centres and is coordinated by Cyprus Civil Defence, is based on two of the main themes of this workshop:

- Looking into the use of new technologies to disseminate a risk culture in schools and in the school community;
- Presenting experiments and pilot projects in risk education, especially at school.

In addition to the sections describing the different risks and hazards, one of the main purposes of the website's "Information and education" section is to offer secondary school teachers tailor-made teaching aids, links and a subject-specific bibliography, in addition to the material already available (eg in the regional educational documentation centres in France and in basic textbooks), to help them prepare lessons and/or practical work for their upper and lower secondary school pupils.

Compiling information on landslide hazards was chosen as a pilot project, with the CERG in charge. Drawing on the expertise and skills of some of its members, who are researchers and university teacher-researchers, the CERG designed the general section describing the different types of landslide, as well as a series of case studies. A number of secondary school teachers provided valuable advice.

One of the distinctive features of landslides is their great variety. Many occur suddenly, on a small scale and with limited effects, but some may endanger human life. In some cases they cause socio-economic and humanitarian problems, either directly or more often indirectly (serial consequences).

We have chosen to present these different types of landslide in two sets according to the speed at which they move. In *slow movements*, deformation is gradual and may or may not be accompanied by break-off, but there is normally no sharp acceleration. These movements can be monitored and controlled, and do not directly endanger people's safety. *Rapid movements* can speed up sharply and can cause considerable loss of life because they occur suddenly and on a large scale.

Each type of movement is presented in a fact sheet comprising sketches and photographs in reply to various questions asked. There are different levels of information and detail, so that users can briefly look at various points or explore them in greater depth ("read more" fact sheets, internet links and a subject-specific bibliography).

Several case studies have been produced to help teachers explain the various processes and address the different aspects of education, awareness-raising and prevention.

As landslides vary widely in form, volume and speed of movement, and in terms of the reasons for their occurrence or recurrence, their spatial distribution and the forecasting and prevention methods and facilities available, we have had to make great efforts to clarify and simplify the information. The secondary school teachers whose help we enlisted played a key role here, in altering the texts and diagrams we had prepared, making them more accessible and giving them a sort of teacher's seal of approval. We have not as yet had any official meetings with area education authorities (eg inspectors and guidance counsellors) to obtain permission to validate the documents in classroom situations and advice on doing so. We plan to do this in the coming months.

## Use of new technologies in major hazards education through 3 examples

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For the past few years the Interministerial Information and Co-ordination Office has been making use of new technologies in carrying out its educational policy. I shall present this policy through 3 examples of the use of new technologies.

### **Example 1: Computer graphics**

This is an animation project on major hazards. It uses flash animation to present major hazards such as earthquakes, fire, storms and flooding in several blocks forming an imaginary landscape.

Each block is independent and gives a detailed picture of the damage caused by a hazard and the "reflexes" that would have been needed to reduce vulnerability. All the images are animated and interactive. Special blocks are added to enable teachers to make optimum use of the product.

### **Example 2: Stop Disasters**

The ISDR has designed a game called "Stop Disasters" ([www.stopdisastersgame.org](http://www.stopdisastersgame.org)). The Ministry for Ecology, Sustainable Development and Town and Country Planning financed its translation into French and arranged for it to be officially launched on the latest International Day for Disaster Reduction. In the more distant future, a national competition is planned on the subject.

### **Example 3: use of video**

The Ministry for Ecology, Sustainable Development and Town and Country Planning is trying to boost the online use of video to prolong the impact of messages on major hazards. The latest example is a video of the minister posted on the occasion of 10 October ([http://www.prim.net/education/journee\\_prevention.html](http://www.prim.net/education/journee_prevention.html)).

### **Conclusion and prospects:**

The ultimate aim is to put online the greatest possible range of resources on major hazards.



## **Role of school administration, teachers and parents to assess schools' safety**

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A program of developing tests for school administration, teachers, students and their parents was developed to ensure safety and security and take preventive measures against threats such as natural and man-made emergencies in peace time and even terrorist attack threats.

Around 2 billion people in the world (one third of the entire mankind) were somehow exposed to natural disasters in the 20th century. But frequently, when due to some circumstances that may be a consequence of a natural or technological disaster or military actions, a human being has been found face to face with an approaching danger requiring special skills in order to survive.

Due to a great social significance that each child has for his/her family and for a society in general, it is our prime responsibility to protect children from any kind of danger that might wait for them at home, during school hours and at a rest. We must be sure that if our children were affected by any type of emergency, school administration, teachers and students themselves will be able to save their lives and health through active and competent coping actions.

In fact, those working inside a school will be the immediate responders to any emergency which might occur in their school while the police, fire, rescue and other community first responders are on the route.

Unfortunately, recent events' analyses have proved that in many cases the capacity to provide this requested urgent assistance simply doesn't exist.

Preventing future tragedies requires taking a "multihazard" approach to school emergency planning, educating the school community on the role it is called to play in ensuring safe school environment, taking preventive measures to reduce natural and technological disaster risks and to be able to avoid terrorist threats.

To this end, the tests developed by the European Interregional Educational Center for training rescues (ECTR) will promote the increase of safety and security levels in schools through:

- **tests for parents** enabling to raise the level of safety and security culture, improve preparedness and undertake preventive measures to reduce risks for children
- **tests for school administration and teachers** enabling to assess the extent to which the school is safe and ready to cope risks to their school.

The organization of a training process and achieving adequate behavior skills in a young generation and in other segments of the population when warned and informed about an imminent disaster risk are fundamental links in the setting up national and regional early warning systems.

The ECTR, with support of the European and Mediterranean Major Hazards Agreement of the Council of Europe, has prepared a package of interconnected information materials (focused on earthquake and flood hazards and possible chemical and nuclear accidents) addressing priority actions to be taken by population (and in particular school children) when warned of a specific threat.

These information materials based on a standard scenario, emblem and motto are targeted to teach how children should act in case of an imminent threat and in long run should ensure adequate knowledge of how to reduce risks for the future generations.

## **Involving Children in VCA & Communications for Disaster Risk Reduction**

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The International Federation of Red Cross and Red Crescent Societies' contribution to disaster risk reduction aims to build safer and resilient communities. In line with the Agenda for Humanitarian Action (AHA), adopted by States Parties and National Societies 4 years ago at the International Conference of the Red Cross and Red Crescent Societies<sup>3</sup>, and with the Hyogo Framework for Action 2005-2015, we have heavily invested in preparedness so that our member National Red Cross and Red Crescent Societies have the capacity and resources to support the local authorities and communities to reduce risk and respond to disasters in a timely and effective manner.

Disaster risk is of concern at all levels due to increasing vulnerabilities stemming from population growth, unplanned urbanisation, environmental degradation, technological, and socio-economic conditions, such as poverty. Combined with the negative humanitarian consequences of climate change, these vulnerabilities are likely to increase and bring even larger impact on the local communities, including children population.

Although children are particularly vulnerable when disaster strikes and in its aftermath. Properly educated and trained, they can be catalyst and agent actively contributing to the disaster risk reduction at the community level.

Children's participation through school, and their communications, is crucial to build and sustain popular support, through community-based approaches, for the consensus and cooperation that is necessary for the disaster risk reduction, including the understanding on climate change, in their communities. Nevertheless, the school community can not operate alone in this process. To implement effectively different initiatives that are interlinked with planning, implementation and follow-up, the school community needs the back-up from the relevant government authorities and the neighbourhood where the school children come from.

We do this through involving children and their communities in vulnerability and capacity assessments (VCA). From our experience, we have seen the engagement of children in the VCA process generated an understanding of the risks from the hazards that the school and communities face, as well as the social, economic and environmental factors that determine their vulnerabilities. It also made them realise that they have capacity to mobilize their family and community members, and through communications to strengthen these capacities with their surrounding to address the challenges.

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<sup>3</sup> The general objective 3 of the AHA is to minimize the impact of disasters through implementation of disaster risk reduction measures and improving preparedness and response mechanisms

With the support from ProVention, the Organisation of American States and the International Federation of Red Cross and Red Crescent develop a project for producing a series of handbooks on disaster risk reduction for Latin America. (handbooks in Spanish are downloadable at <http://www.cruzroja.org/desastres/redcamp/Provention/modulos.htm#escu> and the English version will be made available at the beginning of 2008.) The project's approach is to promote simple community-based risk assessment activities through common methodologies and tools. According to a user's feedback "VCA enabled us to understand existing risk in the community. We now understand that we need to be better organised and work together with other organisations to solve our common problems."

## **Concluding session**

### **Identifying future needs on risk education**

## Thematic Cluster on Education and the forthcoming Education Conference

*United Nations/ International Strategy For Disaster Reduction (ISDR)*

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It is now well documented that the exchange of knowledge and information has been a key factor in more generally advanced work in disaster risk reduction. This has enabled, for example, the promotion of disaster risk reduction, policy development and ultimately the delivery of tangible solutions at the local level.

In January 2005, 168 Governments adopted a 10-year plan to make the world safer from natural hazards at the World Conference on Disaster Reduction, in Kobe, Hyogo, Japan. The "Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters" (Hyogo Framework) provides guiding principles, priorities for action and practical means to substantially reduce disaster losses by 2015.

The Hyogo Framework represents the essential international guide for implementation of the ISDR in the coming years and it constitutes an unprecedented conceptual shift that takes account of the complexity of action in disaster risk reduction and the large variety of actors whose inputs are required in the pursuit of this objective.

With the active participation from its members (UNESCO, UNICEF, ActionAid International, IFRC, Council of Europe and others), the ISDR system is supporting national and local efforts in the area of education for disaster risk reduction in a coordinated manner through specific actions: reviewing current initiatives, gaps and opportunities related to the subject; developing work plans based on outputs and indicators; working in close collaboration with Governments, facilitating increased action and commitment; sharing lessons learnt and creating exchange networks among various public and private institutions.

These exchanges allow representation of a full range of actors - key international actors; governments; NGOs; national/regional institutions and organizations networks. Exchanges and forums are constantly active on the Internet or happening via e-mail.

The platform is aiming, among other things, at strengthening its network, creating new partnerships, identifying gaps and sharing members' priorities; determining key areas and advancing together towards effective results which can help countries achieve the Hyogo Framework goals through knowledge sharing and education.

Currently the platform is working towards the development on an on-line library for education and disaster risk reduction. The initiative addresses the need expressed by national actors to have access to available material related to education and disaster risk reduction, that they could use as a reference to facilitate the inclusion of the issue in school curricula and public education, as prioritized by the Education Campaign launched by ISDR in 2006.

As a number of events and meetings related to the issue of education and disaster risk reduction have been taking place world wide, it emerged that more time needs to be dedicated to the subject and in a collective way. To respond to this need, the platform is currently working towards the organization of an international conference that will support the advancement of the Campaign.

To advance on the education campaign it is necessary to get the involvement and commitment of the Ministries of Education. To reach this target, in collaboration with IBE/UNESCO, part of the thematic platform, a workshop on education and disaster risk reduction will be planned within the International Conference gathering Education Ministers in Geneva November 2008. A preparatory technical session to be held before the International Conference of Ministry of Education will serve as a forum which will help bridge gaps, share good practice and experience on education for disaster risk reduction and develop strategies for progressing the issue all around the world, setting the roadmap through the Hyogo Framework for Action priority 3.

## **School Safety and Disaster Risk Reduction Education - What Next?**

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The Disaster Risk Reduction Begins in Schools Campaign is winding down, but our work has just begun. New School Construction is still not disaster-proofed, school retrofit is yet to be prioritized and completed in many places, guidelines and standards are needed for safe school construction. The Coalition for Global School Safety, the Asian Disaster Preparedness Center, the UN Center for Regional Development and other partners are developing guidance resources.

A wide range of promising educational material, increasingly sophisticated, has been developed in many countries, but much of this continues to jump from hazard awareness to response preparedness, skipping right over physical risk reduction. Materials and programs need to be fully evaluated for behavior change and risk reduction impact potential.

The integration of disaster risk reduction into school curricula is a long-term project, and educational materials and programs remain unevaluated. UNISDR will be proposing guidelines for the integration of disaster risk reduction into school-based education for global review. UNISDR's Prevention Web plans to lay a foundation to support this with a fully searchable Global Online Disaster Risk Reduction Education Library, developed in collaboration with UNESCO.

Regional efforts have demonstrated tremendous potential for future advocacy and leadership. Recent Conferences in Asia Pacific have proposed bold Action Agenda and ambitious regional workplans. These efforts have the ability to breathe continuing life into the work of the Global Knowledge and Education Platform. National Task Forces linked to emerging National Platforms can have a similar advocacy and leadership role to play. And the most important contributions - yours!



