

REGIONAL ANALYSIS on DRR EDUCATION in the ASIA PACIFIC Region

In the context of Priority of Action 3 of the HYOGO FRAMEWORK FOR ACTION



United Nations
International Strategy for Disaster Reduction
Secretariat, Asia and the Pacific, Bangkok

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Cover by: Students attending an open class in Kabul in 2007. Hundreds of schools have been shut owing to attacks on education mostly in southern provinces, according to the ministry of education. © Ahmad Zia Entezar/IRIN

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- ADB Asian Development Bank
- ADPC Asian Disaster Preparedness Centre
- ADRC Asian Disaster Reduction Centre
- AMCDRR Asian Ministerial Conference on Disaster Risk Reduction
- ASB Arbeiter-Samariter-Bund
- AusDIN Australian Disaster Information Network
- CBDRM Community-Based Disaster Risk Management
- DRR Disaster Risk Reduction
- ECHO European Commission Humanitarian Aid Office
- ESCAP United Nations Economic and Social Commission for Asia and the Pacific
- ETF Regional Task Force on Education and School Safety
- HFA Hyogo Framework for Action
- IFRC International Federation of Red Cross and Red Crescent Societies
- IK Indigenous Knowledge
- IEC Information Education Communication
- ISDR International Strategy on Disaster Reduction
- JICA Japanese International Cooperation Agency
- MDGs Millennium Development Goals
- NGO Non-governmental organization
- RCRC Red Cross and Red Crescent
- SAARC South Asian Association for Regional Cooperation
- SOPAC Pacific Islands Applied Geoscience Commission
- TOR Terms of Reference
- UNCRD United Nations Centre for Regional Development
- UNDP United Nations Development Programme
- UNESCO United Nations Educational, Scientific and Cultural Organization
- UNISDR United Nations International Strategy for Disaster Reduction
- VCA Vulnerability and Capacity Assessment
- WCDR World Conference for Disaster Reduction

EXECUTIVE SUMMARY

The Hyogo Framework for Action (HFA) calls on states, regional and international organisations, the United Nations International Strategy for Disaster Reduction (UN/ISDR) Secretariat and partners to review progress in implementing its agreed-upon priorities periodically. To this end a multi-tiered review process has been taking place at the national, regional and global levels.

This Regional Analysis reviews progress in the Asia-Pacific region towards achieving the expected outcomes of the Hyogo Framework for Action's Priority 3 : using knowledge, innovation and education to build a culture of safety and resilience at all levels. The analysis not only reflects national assessments of HFA implementation, but also takes a critical look at progress made in Asia-Pacific by UNISDR and its partners in implementing the Bangkok Action Agenda. Jointly developed by its regional and national partners, the Bangkok Action Agenda provides a region-specific approach towards implementing HFA. It lays out five areas for the region to focus on, and which would enable it to achieve the results aimed at for Priority 3.

Significant progress in promoting disaster risk reduction education has been accomplished in the Asia-Pacific region during the past two years. The momentum has continued to accelerate since the Hyogo Conference on Disaster Reduction in 2005. Commitment from high level national policy makers has been reiterated in subsequent regional gatherings, including the Second and Third Asian Ministerial Conferences on Disaster Risk Reduction in 2007 and 2008. The Asia and Pacific region's Education Task Force has been formed to intensify efforts in promoting disaster risk reduction education. This analysis notes remarkable progress in the areas of regional and national advocacy for policy change, development of tools and guidelines, documentation of good practices and strengthening regional networks. At the same time, considerable efforts are being made to mainstream disaster risk reduction into the formal education system, through improvements in teacher training, curriculum development and delivery and production of materials.

Despite the progress achieved so far, the region is still facing many challenges. Among the critical gaps identified in this report is how to ensure information and research results on disaster management, risk reduction and early warnings reach local authorities and communities. Much more needs to be done to mobilise the participation of community members, especially women and children, the very poor and most vulnerable as well as those with disabilities. Non-formal education approaches and activities require more emphasis. Public-private partnerships are to be kindled so that the achievement of disaster risk reduction becomes the business of all stakeholders. And, most importantly, each country needs its own national strategic plan for disaster risk reduction education, ensuring coherence, synergy and impact. The Analysis draws on the information provided by the Asia-Pacific Regional Education Task Force on the implementation of the Bangkok Action Agenda, as well as on the national reports on the Hyogo Framework for Action of eighteen countries. It does not therefore comprehensively analyse all activities

dedicated to disaster risk reduction education in different localities and countries. Rather it is an attempt to capture the findings that have emerged from the reports available.

The trends, challenges and gaps identified here are indicative. The recommendations for future priorities take this factor into account. In addition, they are directly related to the specific objective of ensuring the impact of future education activities on vulnerable communities and visible shifts in behaviour. The Analysis recommends developing national strategic plans for disaster risk reduction, applying complementary options to mainstream DRR education, promoting participatory approaches and building public - private partnerships.

Notwithstanding the considerable progress made, formidable challenges remain. Urgent action by all stakeholders is imperative for achieving the expected outcomes of the Hyogo Framework for Action by 2015.

1. Link between Education and Disaster Risk Reduction

Strong commitment to promoting disaster risk reduction has been expressed by national leaders at the World Conference on Disaster Reduction in Hyogo and re-affirmed at the Asian Ministerial Conferences on Disaster Reduction, as well as in sub-regional workshops¹. The intricate links between disasters and development have become abundantly clear to national policy makers. In a stroke, disasters can undo progress in socio-economic development achieved over many years. Disasters are posing major barriers to the achievement of the Millennium Development Goals. Risk reduction is now recognized as an essential part of sustainable development.

In the 2006 Review of the Role of Education and Knowledge in Disaster Risk Reduction prepared for UNISDR System Thematic Cluster/ Platform on Knowledge and Education, Professor Ben Wisner says "Education, knowledge and awareness are critical to building the ability to reduce losses from natural hazards, as well as the capacity to respond to and recover effectively from extreme natural events when they do, inevitably, occur." The Second Asian Ministerial Conference on Disaster Risk Reduction (2007, India), urged governments to make school safety and the integration of disaster risk reduction into school curricula a priority on the national agenda. The Third Asian Ministerial Conference on Disaster Risk Reduction (2008, Malaysia) recognised education as an essential contribution to effective implementation of disaster risk reduction and concrete impact in terms of shifts in behaviour at the local level, where communities are most vulnerable to disasters.²

2. Reporting on the Implementation of the Hyogo Framework for Action

The Hyogo Framework for Action calls on states, regional and international organizations, ISDR system partners and the ISDR secretariat to prepare periodic reviews of progress and to identify gaps and challenges in implementation. To this end, a multitiered process of reviewing progress at the national, regional and global levels has been developed against HFA priorities, which will feed into the 2nd Session of the Global Platform for Disaster Risk Reduction to be held in Geneva in 2009. Governments and UNISDR

¹ For Example, SAARC workshop on Mainstreaming Disaster Risk Reduction in Development (November 2008);

² Regional Analysis Terms of Reference

system partners worldwide have submitted national reports on disaster risk reduction implementation, including specific achievements in disaster risk reduction education. Eighteen countries in Asia and the Pacific have reported on their HFA implementation.

The 2007 Asia-Pacific Regional Workshop on School Education and Disaster Risk Reduction led by UNISDR and members of the Regional Education Task Force marked a momentous step forward in the implementation of HFA. The workshop adopted the Bangkok Action Agenda which provides the regional blueprint to guide the region's disaster risk reduction actions towards achieving HFA outcomes. The Bangkok Agenda recommends five key priorities for action. Two years on, the members of the Regional Task Force on Education and School Safety have now conducted a mapping out exercise to outline their achievements in implementing the Bangkok Action Agenda recommendations.

3. Methodology and Scope of the Analysis

This Regional Analysis is one of the HFA thematic reports and covers the period from mid 2007 to the end of 2008, within the first biannual HFA reporting cycle. It addresses only one thematic dimension – the use of information, knowledge and education to build a culture of safety and resilience, under HFA Priority 3. The Analysis has drawn primarily on three key sources of information. First, the Mapping Report of the Regional Task Force on Education and School Safety on the progress of implementation of the Bangkok Action Agenda's five priority areas. Secondly, the education sections of the national reports of eighteen countries³ in Asia and Pacific. These national reports were produced to monitor the progress in implementing the priorities of the Hyogo Framework for Action⁴. Thirdly, UNISDR's publications on good practices. The Regional Analysis used the Bangkok Action Agenda priorities as the main frame of analysis, while also taking into account the HFA core indicators for Priority 3. The structure of the Analysis reflects the Bangkok Agenda's five priority areas where action is required in order to achieve the outcomes of Hyogo Framework for Action priority 3.

The Regional Analysis endeavours to assess the achievement and key trends in national and regional progress in promoting disaster risk reduction education. The assessment of progress and trends is then followed by an analysis of challenges and gaps encountered in the region. It concludes with some

recommendations for future emphasis. Based on information available in the submitted national reports and the ETF report, the Analysis is not a comprehensive account of all educational and research activities dedicated to disaster risk reduction, or of all efforts in different localities and countries. The Analysis is an attempt to capture the findings that have emerged from currently available reports. Therefore the trends, challenges and gaps identified are indicative and non-exhaustive⁵. The recommendations for future priorities are put forward with these limitations taken into account. The recommendations also take into consideration the specific objective of ensuring the impact of future education activities in vulnerable communities and a visible shift in behaviour. They do not attempt to address all the gaps encountered.

Notwithstanding the limited scope and level of comprehensiveness, the Regional Analysis provides useful insights into the Asia-Pacific landscape of efforts, achievements and gaps in promoting disaster risk reduction education. The Analysis is part of the global action undertaken on DRR Education by the Thematic Platform on Knowledge and Education and will feed into education discussions to be held at the Second Global Platform on Disaster Risk Reduction in June 2009. The Analysis is a contribution from Asia-Pacific to the Global Assessment Report on disaster risk reduction trends to be presented to the Second Global Platform.

³ Armenia, Australia, Bangladesh, Bahrain, Indonesia, Iran, Kazakhstan, Nepal, Korea (Republic of), Lao PDR, Marshall Islands, Mongolia, New Zealand, Philippines, Sri Lanka, Tajikistan, Turkey, Vanuatu.

⁴ The National reports follow the four core indicators set out under HFA: 1. Relevant information on disasters is available at all levels, to all stakeholders (through networks, development of information sharing systems etc.); 2. School curricula, education material and relevant training include disaster risk reduction and recovery concepts and practice; 3. Research methods and tools for multi-risk assessments and cost-benefit analysis and developed and strengthened; 4. Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.

⁵ There is a necessary modification to the Terms of Reference for the Regional Analysis concerning the sections on replication of good practices. The intention had initially been to synthesise the impact and replication of good practices and successful cases to other countries and regions. However, the research of available publications and information portals in this area made it apparent that such a synthesis is premature at present. The content of the section addressing this issue has been altered (compared with TOR) to reflect this reality.

II. PROGRESS IN USING KNOWLEDGE, INNOVATION AND EDUCATION TO BUILD A CULTURE OF SAFETY AND RESILIENCE AT ALL LEVELS

1. Achievements and Key Trends in the Region in this Reporting Period

The Regional Task Force on Education and School Safety was formed to spearhead disaster risk reduction education throughout the Asia and Pacific region. Currently it is composed of the ADPC, ADRC, ASB, ASEAN, ESCAP, IFRC, UNESCO, UNICEF and UNISDR, as well as an expanded network of local, national and regional actors working in the fields of education and disaster risk reduction.

Gathering momentum, and with renewed commitment following the 2007 Bangkok Regional Workshop on DRR and School Education, ETF members have been accelerating their work to advocate with national governments on DRR education. The Bangkok Action Agenda recommends five priorities and corresponding actions to serve as blueprints for the work of UNISDR system partners. They can be seen as the regionspecific guidance for the implementation of the Hyogo Framework for Action Priority 3. The recommendations touch upon concrete areas where action needs to be undertaken in order to achieve progress in implementing HFA Priority 3 and to reach HFA Strategic Goals.

The recommendations of the Bangkok Action Agenda effectively complement the core indicators of the Hyogo Framework, particularly with the specific guidance on making schools disaster resilient and promoting the participation of communities and children in disaster risk reduction initiatives. The paragraphs that follow analyse the region's progress in implementing the Bangkok Action Agenda recommendations, as well as the Hyogo Framework for Action Priority 3.

The ETF has recently conducted a mapping out exercise to take stock of on-going and planned activities for DRR Education in the Asia and Pacific region along the lines of the five priorities of the Bangkok Action Agenda recommendations. The ETF mapping report and reports from the national authorities have showed that, in the two years since the 2007 Bangkok Regional Workshop on DRR and School Education, there has been considerable progress. The momentum for disaster risk reduction education has gathered considerable pace. Most significant progress has been in the areas of regional and national advocacy for policy change, development of tools and guidelines, documentation of good practices and strengthening of regional networks. Areas where there has been less progress include the mobilisation of children and community members, information and research dissemination and partnership with the private sector.

In addition, it is evident from national reports that most countries do not presently have a national strategic plan for DRR education. The following analysis of progress is based on the five Bangkok Action Agenda priority areas⁶.

Integrating Disaster Risk Reduction into School Education

The pivotal role of education in reducing disaster risks has been recognised by national policy makers. It is now beyond the discussion stage that integrating DRR into the education system is essential and it should be done from different angles and on different fronts. There has been a marked increase of initiatives in Asia-Pacific to promote the integration of disaster risk reduction into school education. Concrete action is firmly on the agenda of regional partners, as well as in the majority of countries. Progress is evident in the assessment of existing teaching and learning materials, developing new ones, designing adaptive teaching approaches to training teachers and working in partnerships on strategies to make DRR a part of the official curriculum.

The ETF mapping report shows a fast pace of action by a number of partners in the assessment and inventory of existing programmes in integrating DRR into the curriculum (ADRC, UNCRD, UNESCO, UNISDR). A review of existing education materials, programmes and school-based activities, as well as teacher education curriculum and training resources, has been taking place in sixteen countries. This process is continuing throughout 2009. UNCRD will help design a DRR integration model in school education in two countries (Fiji, Indonesia) which should help other countries in developing theirs. In addition to the inventory of different types of learning materials, UNESCO has planned to conduct a mapping exercise that will also include other important aspects, such as how these materials are introduced into schools (e.g. formal, extra-curricular, etc.), which age groups of children are covered, frequency of instruction, as well as stakeholders who are currently involved, or plan to be involved, in the provision of DRR in schools. It will identify evaluations that have been conducted on the use and effectiveness of materials and approaches.

The results of such undertakings are important not only for the future development of complementary teaching and learning materials, but also for mobilising as many stakeholders as possible. Even more crucial is the influence they will have on the choice of approaches or combinations of alternatives in DRR inclusion into the education process. Reports from a number of countries have confirmed the necessity of this undertaking, as their efforts to include elements of risk management and reduction in the curriculum had not been successful due to the sporadic and ad hoc nature of the inclusion process as well as to the lack of evaluation of applied approaches.

More than half of reporting countries gave accounts of progress in their efforts to include DRR content in the formal curriculum. Progress has been especially evident with regard to the development of teaching and learning materials. A relatively wide range of materials and activities has been developed and is becoming part of the students' learning programme. These include curriculum-based resource kits, IEC materials on disaster management, textbooks, films, disaster management guides, activity-based materials for multiple hazards, audio-visual materials, mock drills and art competitions, as well as sensitisation campaigns, school-wide and inter-school events dedicated to promoting disaster reduction. Some of these materials have incorporated locally relevant content.

Innovative and interactive teaching/learning approaches, tools for participatory DRR education as a part of formal curriculum and material for teacher training have also been designed. By taking into account children's psychology and perspectives, these approaches will be effective in maintaining children's interest and imparting knowledge. Organisation such as, ADPC, ADRC, Kyoto University and UNCRD are particularly active in this area. For example, the Priority Implementation Partnership on Mainstreaming DRR into Education Sector⁷ is promoting stakeholder consultations for making DRR curriculum more child friendly, reviewing existing public awareness material on DRR available in the country and the region. The most suitable materials for children such as board games, visual teaching aids and workbooks will be selected and adapted for use as curriculum support material for the DRR module. The design and production of interactive multi-media tools, games and visual teaching aids on disaster education is relevant and timely.

These undertakings are expected to continue and are already providing useful help to countries in their efforts to improve their current situation. Some countries report that the inclusion of disaster awareness and risk reduction in school programmes has been sporadic and perceived as a 'burdensome' addition to an already charged curriculum. Among other reasons, this may be attributable to ineffective approaches being used and the lack of clear implementation guidelines. Therefore the ETF's review of what has existed and how things have been done until now will shed light on the nature and value of current methods of integrating DRR materials into school education. It can help shape future strategies and identify ways to improve both the process and content. According to the ETF report, several partners are conducting similar assessments in the same countries (Indonesia, Philippines). It would be beneficial if these activities are harmonised so that duplication can be avoided, synergy achieved and all grade levels are supported.

While there is progress in the inclusion of DRR in the curriculum, the degree of success and intensity of activities varies across the region. In some countries, DRR education starts from the primary grades, and certain activities have already started in kindergartens. In the majority of countries it begins only from grade 6 onwards. Specialised courses in disaster risk management are available at university and postgraduate

⁶ Five priority areas in the Bangkok Action Agenda are : 1. Integration disaster risk reduction into school education; 2. Strengthening disaster risk reduction; 3. Making school safer; 4. Empowering children for disaster risk reduction; 5. National and regional Approaches.

⁷ To be complemented by ADPC and UNDP in Cambodia, Lao PDR and Philippines, with support from ECHO

level. However only in less than half (seven) of the countries that have sent reports, undergraduate and post-graduate programmes on disaster management and mitigation are being offered.

ADPC's on-going development of Process Guidelines on Mainstreaming Disaster Risk Reduction into the Education Sector presents a major step forward. The lack of process or implementation guidelines had been reported by many countries as a key factor constraining action to make DRR part of the teaching and learning process and overall progress in integrating DRR into school education. The Guidelines and country-specific framework curriculum plans are expected to be completed in 2009 in three countries (Cambodia, Laos and Philippines)⁸. Concurrently preparatory work is also under way for developing a regional strategy to mainstream DRR education, with the participation of many ISDR partners. The work both at the regional and country levels is bringing about a convergence of ideas and experience which will benefit the whole region. This represents a solid foundation for the institutionalisation of DRR education.

Consultations among regional organisations, national authorities and civil society organisations have continued to increase. This very encouraging trend can be observed in different areas of activities conducted so far, such as the assessment of national policies and programmes for DRR integration in school education, improvement of DRR curriculum to make it more child-friendly, development of new teaching and learning materials and the collection of indigenous knowledge and good practices. This is critical for expanding the cooperation and partnerships among stakeholders and for bringing about positive results of activities.

Strengthening Disaster Risk Reduction Education for Community Resilience

The call to involve communities for disaster risk reduction was launched in the Hyogo Framework for Action, further reaffirmed in the Bangkok Action Agenda and reiterated in the Declarations of the Second and Third Ministerial Conferences on Disaster Reduction. Enthusiasm for making this a reality is expressed in the objectives of many national and regional projects. The involvement of communities is expected to strengthen the sustainability of DRR in school education, both formal and non-formal.

The ETF and country reports point to an emerging trend in promoting participatory mechanisms for disaster risk reduction education in Asia-Pacific. Although local level participation still needs to be intensified, an increasing number of activities to promote community participation for disaster reduction can already be observed. They range from promoting parents' participation in school-based activities to developing tools for participatory disaster education as a part of the formal curriculum, from building public awareness

through using media to integrating Community-Based Disaster Risk Management (CBDRM) in the socio-economic development process. Reports from seven countries (Australia, Bangladesh, Iran, New Zealand, Philippines, Sri Lanka and Turkey) have referred to the increase of involvement and awareness at the grassroots level as a critical step in improving their preparedness for emergencies and disasters. Media strategies have been developed to complement public education programmes and social marketing. Campaigns, debates, street dramas and annual events (for two countries, *monthly* events) on disaster risk reduction have become regular features. Campaign materials are also translated into several local languages (Sri Lanka). Collaboration between government institutions and non-government actors is particularly active in building up public awareness of risks. In many cases, building awareness in rural communities has been actively supported and conducted by NGOs and other community based organisations, which typically have close connections to the local population. School-based DRR activities have increasingly extended to involve more and more parents' participation. Encouraging progress is being made in involving parents in retrofitting schools (Fiji, India, Indonesia and Uzbekistan) with the support of UNCRD and a number of civil society organisations. This is one of the effective ways whereby parents can be active participants of DRR education of their children. At the same time it sensitises them towards the necessity of building safe schools, supporting schools' DRR initiatives and encouraging other members of the community to do the same. Educational material targeting parents on "school safety and role of parents" will be developed soon with the support of UNCRD and could be adapted for use in other countries as well.

The community-based disaster risk management (CBDRM) is gaining popularity in the region. There is potential to expand this trend to incorporate disaster risk *reduction* as well, as many elements related to risk prevention and reduction can be included in the community risk management process. ESCAP is supporting the integration of CBDRM into the socio-economic development process through its project on Partnership for Disaster Reduction for South-East Asia 4 (PDR SEA 4) and Typhoon Committee activities. An important component of this project is the heightening of the community's awareness about the importance of DRR education and their role in it. A media strategy for DRR is being employed to sensitise communities on the importance of DRR education and to mobilise their involvement.

It is encouraging to note that regional organisations have given increased attention to mainstreaming gender in DRR activities. UNCRD is supporting a research project on "Gender in CBDRM" to assess the status of gender inclusion and methodologies for mainstreaming gender balance in DRR activities. It is under way in four countries- Nepal, Bangladesh, Sri Lanka, and Turkey. UNCRD will also support the development of methodologies for effective gender balance in community based DRR activities. Given that only one country (Iran) reports progress in gender perspectives, this assistance from UNCRD is critical as it helps lay the foundation for bringing gender balance in community-based DRR and encourage more initiatives to be undertaken in this respect. Women's knowledge and experience can be tapped, and the power of both women and men can be harnessed, to build their community's resilience.

The level of community resilience is determined by the success and sustainability of both community-based disaster risk management and disaster risk reduction. Until recently much emphasis had been placed on community-based risk management, with attention given to relief and post-disaster management.

⁸ With support of ADPC

The shift towards pre-disaster preparedness and risk reduction is gaining visibility on the national and regional agendas. Nearly half of the reporting countries have achieved progress in adopting formal and non-formal strategies and programmes to promote risk reduction. ESCAP is supporting the development of a people-centred tsunami warning system in Myanmar and Pakistan to ensure tsunami warnings reach every person of the community and that community members know how to respond.

There is a welcome trend of accelerating documentation to build the evidence-base to promote DRR education. A rich collection of good practices on indigenous knowledge for disaster risk reduction has been produced by UNISDR in cooperation with Kyoto University. UNISDR and Kyoto University will be holding discussions with Ministers of Education and DRR experts to advocate for the incorporation of indigenous knowledge in the education sector development plans. Other forthcoming publications, the Critical Review and Analysis of IK and DRR and a book on IK and DRR, supported by Kyoto University, are steps forward in promoting the use of indigenous knowledge for disaster risk reduction.

Through its network of country offices, UNESCO will assess the interrelationships between indigenous knowledge and DRR. This will be followed by a publication of case studies including recommendations for their adaptation for school and community teaching and learning. Great potential exists for such endeavour as in many countries in Asia and Pacific the education systems are being decentralised, and part of the formal curriculum is based on what is called 'local curriculum'. Provincial and local education authorities are encouraged to include local knowledge and wisdom in the delivered curriculum. This presents considerable scope for indigenous knowledge and good practices on DRR to be inserted in the curriculum, through a bottom-up approach.

On-going and planned activities points to an upward trend in the improvement of the information flow between the regional and national levels, and in some cases within the countries themselves. The Pacific Disaster Net, a regional information base set up by SOPAC, is assisting countries in the Pacific in the implementation of their national action plans. An Asia Pacific regional library will be designated to enable wider access to disaster-related information. Australia and Turkey have established central information networks⁹ that serve all emergency management agencies as well as information portals that all actors can access – from communities, schools, media, researchers and emergency management practitioners. The Philippines is piloting the use of common code of hazard events, the web-based Global Unique Disaster Identifier (GLIDE) number established by the Asian Disaster Reduction Centre in Japan. In Bangladesh the recently established Disaster Management Information Centre has connected together 64 districts headquarters and 232 upazilas¹⁰ and provided information services to a sizeable area. Early warning, especially on floods, Bangladesh's permanent calamity risk, has been disseminated to agencies

⁹ Australian Disaster Information Network (AusDIN) and Turkish National Disaster Archive Systematic

¹⁰ The upazilas are the lowest level of administrative government in Bangladesh, equal to sub-districts. There are 482 upazilas in Bangladesh at present

and stakeholders through websites, email and radio. Six other countries have affirmed their institutional commitment to the establishment of a comprehensive information management system.

Regional progress is recorded in the area of assessing the socio-economic impact of disasters to ensure effective inclusion of the poor, disadvantaged groups and gender dimensions in DRR and education strategies. ESCAP is supporting the development of the disaster impacts calculator (DIC). The DIC is being promoted in several regions of the Philippines and selected member countries of the Typhoon Committee. In 2009 the application of DIC is expected in other Typhoon Committee member countries. At the same time ESCAP will organise workshops on coping with climate change in Typhoon Committee areas. Further development and use of Vulnerability Capacity Assessment in national RCRC societies within Southeast Asia is under way with the aim to improve hazard analysis and the understanding of the capacity of communities. The DIC and other research work will help efforts to heighten the awareness of decision-makers and the general public on the enormity of the socio-economic impact of disasters. Communicated effectively, these results can galvanise both decision makers and the public into taking more affirmative action and investing adequate human and material resources in DRR.

Making Schools Safer

The structural safety of schools continues to be emphasised. All parties from policy makers, to local decision makers and teachers acknowledge the necessity of having schools that are resilient to multiple hazards. Disaster-resistant schools both protect teachers and students against hazards and are an effective risk reduction measure. The Bangkok Action Agenda has recommended a number of strategies. They touch upon setting minimum standards and construction guidelines and the provision of training on safe school design. In addition the Agenda urges advocacy for institutionalization of safe schools. ISDR system partners are providing assistance to countries on these aspects¹¹.

Substantial achievement has been reported in the earliest stages towards building disaster-resistant schools – the development of necessary guidelines and tools. Supported by UNCRD, country-specific guidelines to assess and prioritise schools for retrofitting have been developed (Fiji, Indonesia, Uzbekistan). Concurrently a policy tool for national programmes on school safety has also been designed. Progress is noted in producing guidelines and booklets on the scaling up and institutionalisation of disaster-resistant schools. These guidelines take into account the local context, locally available resources as well as the use of modern materials. With plans for further action in 2009, the progress in the development of tools and

¹¹ Information about new school construction and school retrofitting has been provided exclusively by the ETF report. National reports have not included information on this aspect, as it is not required in the HFA core indicators. It is therefore recognized that considerable efforts may have been made in the countries in the retrofitting and construction of schools according to hazard-resistant standards.

guidelines for policy advocacy, capacity building and expansion of safe school construction will continue to gather pace.

Tools for multi-risk assessment and cost-benefit analysis are being developed in several countries. Nepal, with the support of UNISDR, is conducting a national study on the relationship between poverty and disasters, while at the same time applying internationally accepted practices for retrofitting buildings and assessing vulnerability. This is a significant undertaking that Nepal has embarked upon, given its recognised inadequate technical capacity and resource constraints. Australia's National Risk Assessment Framework for Sudden Onset National Hazards makes it possible to use a nationally consistent approach to assessing risk throughout the country. Tools for consistent costing of a disaster's impact on infrastructure are also being developed. They will help inform decisions on preparedness and mitigation works. The Philippines has initiated a study of the vulnerability of critical sectors to climate change and of the impact of disasters on the education sector. The results of this study should help in setting policies that promote disaster risk reduction. Iran is developing a national plan for the safety of schools and important buildings in rural and urban areas, with a dedicated budget.

Reports indicate increased regional efforts to build capacity to help meet the needs for making schools hazard-resistant. This is in response to the gaps in human and institutional capacities that are referred to in most country reports. With the support of UNCRD and Emergency Architects, a number of countries have conducted training on disaster-resilient school construction techniques for engineers, technicians, masons and the local population. These workshops may also become a forum for disseminating local wisdom and indigenous knowledge. With support from UNCRD and JICA, more training for engineers is to take place during 2009.

Advocacy for the creation of national programmes for school safety has accelerated in the last two years. Drawing on good examples of proven techniques in school retrofitting and reconstruction, UNCRD has conducted advocacy with governments for a national level school safety programme with the aim to ensure all schools are safe from earthquakes. ADPC, through its partnership with UNDP and ECHO, has developed country-specific papers on the Impact of Disasters on the Education Sector with special emphasis on school construction processes and practices in a number of countries (Cambodia, Lao PDR, Philippines). Those papers have identified improvements needed and lessons learned which are of value to other countries as well. Advocacy for safe schools should be seen in the context of the broad, all-encompassing efforts for achieving the outcomes of Hyogo Framework for Action.

Construction has started on new hazard-resistant schools using relevant technologies. UNCRD and Emergency Architects are leading the efforts in new construction as well as for school retrofitting in certain areas struck by the recent tsunami and earthquakes (Indonesia and Solomon Islands). Similar schools will be built in 2009 in Pakistan in areas that were damaged by earthquake. In India schools are being retrofitted with the use of new technology and there is great potential for it to expand to other

countries in the region¹². It should be noted that the number of these new disaster-resistant schools in the region may be considerable, but they have not been recorded in the national reports, which are based on the core indicators of HFA reporting requirements.

Empowering Children for Disaster Risk Reduction

The United Nations Convention on the Rights of the Child affirms the right of children to participate in matters that affect their survival, well-being and development. Research and field experience demonstrate the effectiveness of their involvement in activities that concern them. Children's ability to participate, based on their evolving capacity, is beyond doubt.

At the international level, advocacy to facilitate channels for children's participation has been supported through high level recognition and publicity of good examples of children's contribution in saving lives. Stories of how an eleven year old British girl and an Indonesian boy saved hundreds of lives have captured international attention and admiration, as was recorded in the CD-Rom produced by UNISDR. They spectacularly illustrate that children can 'work miracles'. The publication "Let Our Children Teach Us-Review of the Role of Education and Knowledge in Disaster Risk Reduction"(UNISDR, 2006) has also re-emphasised this with many other examples of children doing their part in their community's efforts to manage, mitigate and reduce disaster risks. In Australia students have been engaged in the identification of risks from natural disasters in their immediate community and in the cross-examination of the emergency risk management process to mitigate the impact of natural disasters. In the Philippines children in Southern Leyte have played an active part in a host of activities, from post disaster needs assessment and relief operations to promoting environmental protection and climate change adaptation.

These examples notwithstanding, there is a continuing trend of under-involving children in DRR education activities. Most national reports have been silent on the role of children and of their involvement in DRR education. Policy-makers still need to be convinced of children's ability to be active participants in programmes that concern them. Even when children's capabilities are recognised, there are gaps in the actual process of involving children in DRR education programmes. Advocacy with decision makers at different levels – from national to provincial, to community and school- is called for, as is support in the methodologies and techniques to mobilise children. Enabling children to participate meaningfully calls for adults to review their approach to engaging with children and to take affirmative action to promote their genuine involvement. Progress in this area is a prerequisite to bringing about changes in the behaviour of children, as well as of adults, towards building their resilience.

¹² In currently available reports, there is no mention of the numbers of schools that have been, or will be, retrofitted and built according to disaster-resilient standards.

More progress has been reported in the area of teacher training, on the other hand. Both regional partners and national authorities have been giving more attention to this area. Topics for training include disaster safety in schools, measures for preparing for disaster and coping with its aftermath and methods to raise awareness in DRR, among others. Through projects supported by UNDRC, IFRC and Kyoto University, teacher training has been conducted in eight countries in Asia-Pacific. In some countries nongovernmental organisations are providing training with a focus on mitigation and preparedness. Within the Philippines, for example, the Red Cross conducted training in disaster preparedness, safety and health services and psychosocial first-aid, while the Centre for Disaster Preparedness promoted the Training and Learning Circle that facilitates the interface between community-based organisations, training institutions and universities. In many countries NGOs have also been active providers of training to teachers, community members and disaster managers. The prospect is promising for their continuation and outreach to more communities in each country and more countries in the region.

National and Regional Approaches

There is a high level of commitment in the Asia-Pacific region to accelerating the multifaceted process of promoting disaster reduction education in order to build a culture of safety and resilience. Much has been accomplished with regard to advocacy, establishment of networks and information sharing channels and in strengthening regional support and coordination mechanisms. Dialogue between policy makers, curriculum developers and DRR practitioners is stimulated throughout the region through face-to-face and virtual exchanges.

The ISDR Secretariat, its regional partners and members of the Education Task Force have supported a series of regional events for information sharing, dissemination of DRR education materials, and advocacy for policy change. These events play a significant role in mobilising and building the political will of governments towards mainstreaming DRR in their education sector plans. Advocacy has been intensified, particularly with Ministers of Education, to include DRR as part of the school curricula and to promote school safety as part of national education strategies. Sustained advocacy of UNISDR system partners has led to the recognition of national policy makers that DRR education and school safety are a major regional policy challenge and priority for the Asia Pacific region. This has been affirmed in the Ministerial Declaration adopted at the 2nd Asian Ministerial Conference on Disaster Risk Reduction (Nov 2007, India) by Ministers in charge of DRR. The High Level Round Table Recommendation to the 3rd Asian Ministerial Conference on Disaster Risk Reduction has also echoed this. In addition, with the integration of the Regional Network for Education and School Safety in Asia and the Pacific as part of Global Education Listserv, it can be expected that more experiences, opinions and materials on DRR education will continue to be shared and exchanged both within the region and beyond its boundaries.

In May 2008 ESCAP member states reiterated their commitment to disaster risk reduction through a resolution on "Regional Cooperation in the Implementation of the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters in Asia and the Pacific". This high level commitment of governments provides an enabling environment for accelerating the inclusion of

DRR in the education sector. Spearheaded by UNISDR Asia-Pacific, the recommendations and outputs from the regional gatherings and consultations in the last two years have been fed into the Technical Session and High Level Round Table on Education and Public Awareness for DRR at the Third Asian Ministerial Conference on DRR (Kuala Lumpur, 2008). The momentum is thus being kept up for using knowledge, innovation and education to build a culture of safety and resilience at all levels, as called for by the Hyogo Framework for Action.

The influence of the Asia Pacific region's Education Network continues to expand through the participation of an increasing number of regional partners. Under ADPC/UNDP's project with support from ECHO on Priority Implementation Partnership (PIP), technical working groups have been formed to implement the PIPs in each of the three project countries (Cambodia, Lao PDR and Philippines) with members from various departments of Ministry of Education, National Disaster Management offices, UNDP and ADPC. The Technical Working Groups interacted closely with the Education Sector Working Groups in the countries to identify opportunities for integration of DRR into national education sector plans and programmes. This, coupled with the advocacy of the national task forces on DRR, could facilitate policy changes towards the integration of DRR in national education systems.

Support for DRR education at university level is complementing efforts to mainstream DRR education at primary and secondary levels. Kyoto University is providing assistance in this area through the Asian university network for Environment and Disaster Management. Under this network, 15 universities¹³ from 13 countries are sharing information, networking and advocating for policy change, as well as developing guidelines. IFRC is supporting a postgraduate diploma course in disaster preparedness and rehabilitation in India. Other countries, such as Bangladesh, Korea, Philippines, Sri Lanka and Turkey have also been offering diploma and master's degree programmes on disaster management. More courses are being added to these programmes with updated learning materials. Government cadres in most countries have received training on disaster management and conducting multi-risk assessments under donors' support projects. In Nepal the Administrative Staff College has incorporated DRR in its training programmes for government officials, giving it an institutional base. In Turkey, apart from the standard training format-like courses, seminars and working groups - training through video conference is being used increasingly, especially for government officers, emergency managers and technical staff. Cumulatively, training programmes being offered at the universities and initiatives taking place at schools and communities lay solid ground for more ambitious undertakings in the near future. This can be expected to build a critical mass of administrators, teachers and students who have the tools and knowledge necessary for building a culture of resilience.

¹³ They are: 1. BRAC University (Bangladesh); 2. Beijing Normal University (China); 3. University of Madras (India); 4. Tata Institute of Social Sciences (India); 5. Institute of Technology Bandung (Indonesia); 6. Kyoto University (Japan); 7. National University of Malaysia (Malaysia); 8. Myanmar Engineering Society (Myanmar); 9. Nepal engineering Collage, Pokhara University (Nepal); 10. Peshawar University (Pakistan); 11. University of Philippines Los Baños (Philippines); 12. Peradeniya University (Sri Lanka); 13. Chulalongkorn University (Thailand); 14. Hanoi Architectural University (Vietnam); and 15. Danang University of Technology (Vietnam)

ISDR system partners have been facilitating information sharing. Work has been completed to identify existing education materials for DRR and produce additional ones, and to create varying channels for their dissemination. Printed materials, including Informs Magazine on DRR Education implementation in the Asia Pacific region and good practices have been published (UNISDR). Web-based information networks (e.g. specific section on DRR Education on Prevention Web and E-Listserv) and a soon to be formalised regional library will provide outreach to professionals, practitioners, decision makers and the general public with relevant data and information. At the country level, the one-stop-shop model of Australia (AusDIN) offers great potential for emergency management information to be readily accessible to stakeholders at all levels.

The regional approach has been effective in advocating for strong commitments from government to national programmes of school safety and DRR education, as called for by the Bangkok Action Agenda. In the course of 2008 several regional initiatives took place to advocate for national programmes of school safety and DRR education. Sub-regional workshops on school safety were organised in the South Pacific, South East Asia and Central Asia, and an international workshop on “Reducing earthquake vulnerability of school children in Asia Pacific” was held in Kobe. They reinforced and built on the enthusiasm, motivation and commitment that had been expressed by national policymakers in Delhi (2007) and Kuala Lumpur (2008) for ensuring school safety and disaster reduction education. Regional advocacy events and follow-up support have resulted in considerable work that has been completed in promoting DRR education in the region, as discussed in previous sections. National reports¹⁴ do not provide specific information on the development and implementation of the national programmes of school safety. However references have been made to on-going pilot initiatives of making schools safer, as well as the creation of school-cum-flood shelters in flood-prone areas.

2. Good Practices and Status of Replication of Successful Cases to Other Countries and Regions

A great number of successful practices have been emerging in all corners of the world that address different aspects of disaster management, mitigation and reduction. They are successful because they use indigenous knowledge and innovation, involve women and children in a meaningful manner and make the best use of available resources and experience. Successful practices can be found almost anywhere, including in economically very poor regions. Despite having features that are specific to the sociocultural contexts of areas where they originated, most successful practices can be adapted and replicated outside their original milieu, benefitting many more people. Dissemination of information about good practices in disaster risk management and reduction is therefore a critical step towards scaling them up.

¹⁴ It should be noted that national reports are structured according to the HFA core indicators which do not include school safety aspects.

A review of literature on good practices in disaster mitigation, management and reduction shows that a wealth of information is available. The 2006 publication “Let Our Children Teach Us – a Review of the Role of Education and Knowledge in Disaster Risk

Reduction” (UNISDR) mentions a number of examples. They include good elements on teaching about disaster risks in school, from interactive teaching methods to childfriendly textbooks. School safety initiatives, teacher training programmes, curriculum development for DRR, teaching children and community in recognising cyclone warning, managing effects of calamities and many others were documented.

In 2008 UNISDR, in collaboration with country and regional partners, produced further publications on good practices which provide a valuable source of information and knowledge¹⁵. The “Indigenous Knowledge for Disaster Risk Reduction: Good Practices and Lessons Learned from Experiences in the Asia-Pacific Region” records eighteen good practices on using indigenous knowledge for disaster mitigation and management from Asia-Pacific. Each of those practices is worth careful study and merits wide dissemination and replication. While it is not the purpose of this report to re-document them, it is nonetheless useful to quote here one of the examples.

In India the people of Nandeswar, Assam have successfully conserved soil and water through planting bamboo. It is a simple yet efficient disaster management technique that helps to protect embankments from being breached and prevent rapid run-off from the river when it overflows. Bamboo planted around fish ponds and paddy fields also prevents soil erosion and road damage. Therefore over and above the traditional use of bamboo for construction, crafts and paper making, bamboo helps reduce the flood induced damages. As bamboo is commonplace in many countries, this experience can be beneficial well beyond the boundaries of Assam.

The publication “Towards National Resilience - Good Practices of National Platforms for Disaster Risk Reduction” (UNISDR) shares nine good practices in the establishment and operation of National Platforms for DRR as the effective mechanism to promote national and local risk reduction efforts. In China for example, the implementation of a nationwide contingency system has made disaster relief more successful while at the same time encouraging risk reduction. Its National Committee for Disaster Reduction (NCDR) has played a critical role in ensuring efficient preparedness for response through better national coordination, enhancing exchange and cooperation among ministries and technical committees. The timely release of alerts has enabled authorities at all levels to take precautions and reduce the impact of hazards. The close coordination with municipalities and autonomous regions has also resulted in the pre-positioning of relief equipment in 30 provinces, 251 cities and prefectures and 1079 counties. Concurrently, the NCDR

¹⁵ All UNISDR publications on good practices are available on the UNISDR website.

acts as the channel for the central government to invest in risk reduction for the whole country (US\$ 1.6 billion annually) and promote education on disaster management and reduction. Its work is in effect quickening the paradigm shift from disaster emergency management to disaster risk reduction.

The UNISDR publication “Gender Perspectives: Integrating Disaster Risk Reduction into Climate Change Adaptation. Good Practices and Lessons Learned” details fourteen successful cases of integrating gender perspective. They illustrate how effectively women have participated in disaster risk management and reduction efforts and provided the kind of grassroots leadership that make the whole community strong and sustainable. The following example from Dasholi Gram Samaj¹⁶, Chamoli, Uttarakhand (India) showcases women’s activism and leadership in reducing disaster risk by building community action and resilience.

Women in the Dasholi community have always had a close relationship with the surrounding forest. They started a local environment movement in 1976 as a spontaneous non-violent protest against indiscriminate deforestation, which had been resulting in frequent floods and landslides. They prevented trees from being cut by acting as human shields. Women then established that natural resource conservation was a matter for community concern, and that the issue demanded action involving men as partners. Their initiative has led to a fundamental shift in gender relations due to women’s positioning as community leaders. Their fight against deforestation, erosion and desertification helped reduce the risks of floods and landslides and resulted in the regeneration of the forest. This was not a project-driven initiative, but a women-led movement, which has now transformed the way the state and local government look at forestry and natural resource management. The initiative has had a ripple effect on adjoining villages and districts. It has been sustained for thirty-two years practically without any external support¹⁷. It can be replicated in other regions and different contexts by promoting participatory analysis, local initiatives, joint action among women and men and supporting local champions.

In addition to these UNISDR publications, some good practices have also been documented by other regional partners, such as ADPC. They record successful experiences in mobilising children’s participation, constructing disaster-resistant schools and in using methods and materials for teaching DRR in schools¹⁸. The example quoted here demonstrates the children’s participation in disaster management and reduction in the Philippines. After the 2006 landslide in Southern Leyte, children were mobilised to assess the needs of the families affected by the disaster. They participated in hazard mapping, hazard watching and risk identification in their communities and contributed to disaster risk reduction at school and community level. The children survivors of the landslide helped raise the awareness of their communities on the

effects of disasters through entertainment, music and performance arts. They participated in school and community drills, tree planting and protection, river protection and coastal cleanup. In Mindoro, a group of child radio commentators was formed, and they hosted a youth oriented weekly radio programme to inform communities about disasters and to encourage preparedness. Children set up rain gauges themselves in their schools and communities and educated other children about the use of this early warning system.

These publications offer a tremendous amount of knowledge and experience that have been proven successful in different countries. In parallel with demonstrating good and replicable features, the publications also reflect on lessons learned and which will benefit the future work of the countries of their origin, as well as for successful replication elsewhere. The processes undertaken in those cases to achieve success are clearly articulated to allow for adaptation, and the potential for replication is analysed. The documentation of the good practices is a significant first step to enable them to become known beyond the boundaries of their origin and benefit many more communities.

At the same time, an analysis of the currently available reports, documents and information portals provides little information on whether good practices have been replicated and on the impact of their replication. While it is recognised that replication necessarily takes time, it points to a challenge: publishing good practices is only a first step in the dissemination of information. Although these publications may be known to national policy-makers, researchers and managers, they are seldom disseminated to local authorities, practitioners and communities. Different methods will be necessary to make sure that the information about good practices reaches them. Individual situations and contexts require relevant approaches. At the same time, it may be possible to suggest that key principles, proven effective processes and innovative elements of good practices could be adapted, translated and printed in ways that are friendly to users at the local level. Flyers that use simple language rather than books, in an easy-to-follow and quick-to-reference format and with locally appropriate illustrations would facilitate people’s appreciation and subsequent replication of good practices. Ease of use and ready availability are the key.

The actual process of replication itself needs to be documented too. It would provide useful insights and lessons of the replication, and assess the extent to which good practices and successful cases are being introduced outside their places of origin. This would be an important follow-up to the documentation of good practices that UNISDR has accomplished.

¹⁶ Action for Disaster Reduction and Inclusive Development

¹⁷ Page 40

¹⁸ Mainstreaming Disaster Risk Reduction in the Philippines, ADPC, 2008;

III. GAPS AND CHALLENGES AND GAPS ENCOUNTERED IN THE REGION

Building a culture of safety and resilience at all levels is a long term undertaking. Disaster risk reduction education is one critical link in the construction of this new culture. Despite the considerable work being done to integrate DRR in the education system, schools and the community, there are still major challenges and important gaps. In many ways they are not unexpected, given the magnitude of the task. This section discusses the key challenges and gaps along the five priority areas recommended by the Bangkok Action Agenda.

Integrating Disaster Risk Reduction into School Education

Integrating DRR into school education is a complex endeavour that requires strong national political will, a systematic approach and sustained action. Reports indicate that considerable efforts have been made to integrate DRR into the formal education curriculum. However, the institutional and technical capacity in many countries is still weak, and the financial resources are needed to build these capacities are limited.

In addition, some countries report resistance to incorporating DRR materials in the curriculum on the grounds that the formal curriculum is already heavily charged. Indicators of performance and effectiveness of the DRR curriculum are also lacking. Just as guidelines and other tools, such indicators serve as valuable benchmarks for implementation. There is a need to reach consensus between regional and national partners on what these indicators should be.

Reaching out to staff and children with disabilities in most countries remains a huge challenge. Learning materials, teacher training, teaching methods, extra-curricular activities have yet to take into account their special needs. ASB¹⁹ is the only organisation that has reported assisting DRR education activities for children with disabilities (Indonesia). It supports the development of materials for children and teachers, including special DRR teaching materials for deaf and blind students. It also maps school hazards develops action plans and conduct drills. Many more activities like these, and the support of more organisations, are called for to address the needs of children with disabilities.

¹⁹ Arbeiter-Samariter-Bund, a German NGO Working in Indonesia.

Similarly, gaps exist with regard to materials and methodologies to assess the socioeconomic impact of disasters and programmes for out-of-school children. These include working children, very poor children whose families cannot afford their education, and those who for different reasons are not part of the formal education system. The majority of them are still left out of school-based activities, and often from community-based programmes as well. The region is home to 27 million children of primary school-age who are out-of-school²⁰. These children will continue to be especially vulnerable to disaster risks unless they are featured in a strategy and programme for DRR education. Effective informal DRR education and other outreach methods need to be designed so that children who are not part of the school system have the opportunity to reduce their vulnerability and enhance their resilience. National reports have not mentioned what countries have done to ensure that these vulnerable groups are part of DRR education efforts, probably for lack of reporting guidelines in this area. In any case, the inclusion of the very vulnerable population in DRR education activities remains a recognised yet persisting challenge.

Strengthening Disaster Risk Reduction Education for Community Resilience

The key to building community resilience is public ownership of DRR education programmes. Several essential elements can bring this about: participatory mechanisms, recognition of the role of women, a bottom-up approach and the quantitative and qualitative upgrade of community-based projects. At the moment gaps exist in all these areas.

Massive change in behaviour cannot be expected unless there is greater public ownership of DRR education programmes. Community-focused projects should apply participatory mechanisms forcefully and consistently. Local authorities, community leaders and members, project facilitators all need to be given the opportunity to be genuine participants of DRR education programmes, from planning and implementation, to monitoring and evaluation. Many country reports reiterate the need to bring about a shift of people's mentality from dependency on government relief to self-reliance and preparedness. Such a shift will not be possible unless genuine participation of all community members, especially women, poor and vulnerable people, is encouraged, sustained and recognised. Effective channels for bottom-up communication from schools and communities to the policy making authorities at the regional and national levels are essential, but still lacking in most countries.

Equal access to appropriate training and educational opportunities for women and vulnerable population groups is yet to be achieved. All national reports, except one (Iran), are silent on the involvement of women in DRR education programmes and on efforts to promote women's participation. This may be attributed to the fact that HFA reporting guidelines have not specifically required countries to report on the gender

dimension of disaster risk reduction activities. Whether or not it is reported on, the gender dimensions of DRR programmes remain important, and affirmative action needs to be taken in this regard. Without the input of women, risk reduction strategies will not reflect the concerns of the entire community and cannot benefit from their combined strength. Indigenous knowledge and local good practices have also not yet been incorporated in community based DRR activities. They either have not been disseminated widely outside their original milieu or not sufficiently used. There is little evidence that the rich local knowledge of the environment and good practices in disaster risk management and preparedness are being sought in DRR programmes.

Yet good practices of using indigenous knowledge and women's participation have been documented. The following example²¹ illustrates both the crucial role women play and the effectiveness of indigenous knowledge in disaster risk reduction efforts. In Sri Lanka, women in marginalised communities²² have taken an active part in the planning of an integrated programme for drought risk reduction, better land-use, and better water management with the aim to improve livelihoods. Women and men both worked on planning and deciding the ways by which every household would contribute and benefit. Both men and women were involved in identifying the crops, trees and making land use plans which would increase resistance to drought. With decades of practical experience in managing their environment and knowledge of how climate change-related hazards affect them, they have used their knowledge and experience to work out locally appropriate strategies. The process of capacity building and empowerment has allowed women and men to take responsibility for the work being done. The process of social mobilization, particularly of women as equal and responsible partners, has enabled the communities to improve and diversify their livelihoods, taking measures that both sustain their survival, and decrease the risk of drought and landslides.

Countries report that top-down approaches in DRR education programmes are commonplace. In some countries the top-down approach is quoted as a key factor behind the passive participation of the communities in the DRR activities. There is no doubt that national political commitment and nationally-initiated programmes provide an enabling environment and impetus for risk reduction programmes. However, they are not sufficient for raising public consciousness on disaster risks, or for changing their mindset and adopting behaviours that promote disaster risk reduction. Top-down approaches need to be complemented by bottom-up methods, and the views and participation of ordinary citizens sought and valued. Considerable gaps remain in implementing the kinds of activities that build individual and community resilience and mobilise their participation in emergency planning, preparedness, response and recovery.

²¹ Taken from "Gender Perspectives: Integrating Disaster Risk Reduction into Climate Change Adaptations: Good Practices and Lessons Learned". UNISDR (2008)

²² Villages of Kalugala, Kosdanda, Udailuka and Padupola (Sri Lanka)

²⁰ EFA Global Monitoring Report 2008

It is to be recognised that there are challenges in the actual implementation of bottom-up methods. Involving community members in the processes is time-consuming. Expectations of quick results and impact are not realistic. Effective community mobilisation also requires particular skills, but often there are insufficient qualified human resources. The experience of Bangladesh shows that progress in mobilising people's action also depends on whether awareness raising programmes succeed in addressing the audience as a heterogeneous group, and how messages on disasters are tailored to different situations.

It can be inferred from national authorities' reports that community-focused projects are still relatively few. Where they have been reported, the projects, including those supported by civil society organisations, tend to be limited in coverage and are not necessarily part of a coherent national DRR programme. Compared to initiatives at the national and regional level, insufficient attention has been given to community-level and community-led action. Formal and non-formal activities are not yet integrated. As responsibilities for these programmes often fall on different agencies, the tendency has been that each is designed and implemented separately from the other. Much remains to be done to dovetail formal and non-formal education strategies, so that programmes are mutually-supportive. Vertical and horizontal coordination is weak. Community sensitisation programmes have yet to emphasise Behaviour Change Communication, a strategy which enables awareness raising activities to lead to changes in behaviour and increased community action.

Currently the level of community awareness on risk reduction is generally low. Some countries outperform in this aspect (Australia, Iran, Korea, New Zealand) where community programmes are implemented systematically. In others, public awareness activities tend to be more sporadic, relatively small in scope and inadequate to reach the mass and to all disaster-prone areas. Materials for public awareness activities and their dissemination are still limited in quantity, content and their target distribution. This is on the one hand due to the factors mentioned above. On the other hand, it is also due to the lack of an institutional mechanism and in some cases low commitment. Several countries report that lack of coordination among agencies is causing duplication. Evaluations of awareness campaigns and programmes tend to be rare and it is therefore difficult to assess the utility of methods and materials used.

Slow progress in community-based programmes can also be attributed to the fact that much information on disaster risks is not reaching the communities. While research and analysis has been conducted on hazards, on the physical, socio-economic and environmental vulnerabilities to disasters, in some countries information gathered is not systematically packaged, and results are not widely distributed to the district and local levels (Philippines, Nepal, Sri Lanka, Turkey). One national report indicates that some of the research projects have no practical application in the field and research on DRR undertaken by various institutions with donor funding is not coordinated (Sri Lanka).

How and where to obtain information is not always made clear to the public. All countries but one (Australia) lack a central information channel through which multihazards information can be accessed by all stakeholders at all levels. Some countries point out that the database and system for diagnosis of local safety level needs to be improved on such aspects as population and local risk characteristics (Bangladesh, Korea). While some information is available on the internet or transmitted through mobile

phone networks, communities in far-flung areas typically do not have the possibility to access the internet or the phone network. And it is they who, more than most, have to rely on their own resilience.

On the other hand, when information is available it is under-utilised. Information and innovation are not yet greatly used to sensitise and mobilise the general public towards risk reduction. Reasons for this vary. In some cases data is scattered among different agencies, rarely updated and so limiting its utility (Bangladesh, Indonesia, Philippines, Turkey). Some others (New Zealand, Sri Lanka) apply the user-pay system thus making information inaccessible to the majority of community members. In some cases research results and updated information serve mainly for researchers and policy makers, rather than for educating and sensitising the public. Added to this is the still predominant low awareness of the availability and usefulness of information. The paradox between information availability and usage, which may not be specific to Asia Pacific alone, is a formidable challenge facing both the international community as well as national authorities.

Making Schools Safer

With regard to structural aspects, the commitment to ensuring school safety has been expressed by policy-makers at various international and regional fora. However the challenge lies in the translation of this political commitment into reality. The Bangkok Action Agenda recommends the assessment and prioritisation of schools for retrofitting. The need for school retrofitting is huge. It requires significant investment both in financial and human resources, although such investments produce higher returns in the long run.

The on-going projects that produce school safety manuals and guidelines, train engineers and construction workers, retrofit and build disaster-resilient schools are providing valuable assistance. However, they are still drops in the ocean compared to the scale of demand. Advocacy for resources to make schools safe needs to be intensified. Human resources development could be complemented by the creation of mobile national and regional construction teams that can be deployed in different locations, applying both new techniques and proven effective local practices. Pools of volunteers can be formed and trained from which manpower can be mobilised for scaling up hazard-resilient school construction.

Disaster-resilient schools have to be safe for all children. But in most countries school construction standards have yet to be updated to take into account disaster risks and to reflect the hazard-resistance standards. Moreover, the special requirements for children with disabilities are seldom taken into account. The Bangkok Agenda for Action has recommended that the minimum standards for the construction and operation of school buildings be updated to incorporate disaster mitigation. It also calls for application of "accessibility standards" for students and staff with disabilities. Gaps remain in implementing the recommendations, both with regard to the updating of standards and to the special considerations of people with disabilities. In addition, as schools are often used as post-disaster shelters for the whole community, the needs of all members of the community with various disabilities have to be considered.

Based on what has been reported, public-private partnerships in retrofitting and building schools according to disaster-resistant standards are conspicuous by their absence. The presence of the private sector in education provision is ever expanding in the region. An increasing number of schools are being built with funding from private enterprises. It is unclear if these private schools are hazard-resistant. The private sector has yet to be part of programmes to retrofit and build new schools to these standards.

Empowering Children for Disaster Risk Reduction

Mobilising children in disaster risk reduction education programmes, encouraging child-led initiatives both in and out of school and at the community level is an area where major gaps persist. Programmes are still designed mainly for children, rather than with them. Despite much advocacy on the benefit and necessity of children's genuine participation in development and disaster-related initiatives, there are still few child-led DRR activities. A number of reports and publications have emphasised how it is important and effective to start DRR education with children. Children's meaningful participation, based on their evolving capacity, has been proven effective in both formal and non-formal education programmes²³. Regrettably, progress in tapping into such potential for DRR education has been insignificant. And fundamentally, regardless of the degree of effectiveness, participation is a human right, not an option that can be denied to children.

Despite the Bangkok Action Agenda's call for enhancing partnership with children, such partnerships are not yet evident. Yet these stakeholders are arguably the decisive link in the implementation chain of any strategy or plan for DRR education. They are often the target group of projects seeking behaviour change. Programme experience has long showed that when children are genuine partners they are among the most effective change agents and the most reliable agents for sustaining change. National reports contain no evidence that children have taken an active part in the design of activities, or given their views and suggestions on content areas or on teaching methods.

There is also little evidence of investment in the expansion of children's knowledge and skills, including in recovery situations. Gaps remain in the creation of opportunities for establishing children's councils or parliaments to foster child-based advocacy and decision making. These are effective mechanisms for mobilising children, and have showed their added value in other contexts, such as in promoting whole school improvement, school attendance, child health and protection, and reducing gender inequality. Thanks to the advocacy of UNISDR system partners, children's role in DRR is increasingly recognised at the policy making level. But the key gaps, as in several other areas mentioned above, are at the implementation level where appropriate approaches, skills and perseverance are needed to turn such recognition into practice.

²³ "Teaching in Primary school - A learning relationship", Neil Kitson & Roger Mary (Eds.), 1997; "How children learn", Stella Vosniadou, 2001. International Academy of Education, International Bureau of Education, and other materials on constructivism.

National and Regional Approaches

The Education Task Force report and those from national authorities demonstrate that the progress achieved in many areas has been, in large part, attributed to the synergy between national and regional approaches and endeavours. This is particularly apparent in the expansion and improvement of information networks. But the challenge remains in making information-sharing networks, good practices and capacity building accessible not only to national platforms but also to other actors at the local level.

Considerable progress has been achieved in Asia Pacific in the establishment of partnerships among different parties - governmental, non-governmental, donors, professional associations and civil society organisations. Yet there are gaps in the strengthening of public-private partnerships for disaster risk reduction education. The potentially important role of the private sector in DRR cannot be over-emphasised. In many countries, a fast pace can be observed in the construction of schools and teacher training with funding from the private sector. This trend is accelerating even in comparatively poorer countries in the region. The increasing presence of the private sector in traditionally state-controlled undertakings all the more calls for enhancing partnerships with the private sector.

Although corporate social responsibility is still a relatively new concept in the majority of countries, there are already cases where corporations participate in social development activities. Nokia's support for children's education in Northwest China, private universities' courses on disaster management in Bangladesh, private enterprises funding education activities in India are some examples. Similar partnerships in DRR education are yet to be formed. On the one hand such partnerships help generate resources needed and, on the other hand, the shared responsibilities for reducing risks will be better understood and shouldered by all parties. The private sector's contribution can make a difference in building a culture of resilience at all levels.

The above mentioned challenges and gaps points to a cross-cutting issue that may explain many of the gaps identified - the lack in most countries of national strategic plans for disaster risk reduction education. The assistance from UNISDR and regional partners is valuable in integrating DRR in school curriculum, capacity building, conducting advocacy, promotion of community awareness, etc. While by themselves these assistance programmes are valuable and should not be under-estimated, they will have a greater impact if they are tied together by, and fit into, each country's national strategic plan for DRR. Without it, many activities, though useful and important, will remain ad hoc or add-on interventions which may phase out when funding ends. Education-related components of such a national strategic plan have to be harmonised with and embedded in the country's education sector plan. A dedicated budget must be earmarked to make the strategic plan a reality.

Section III discussed the challenges and gaps encountered in the region. However, the recommendations that follow will not attempt to address all these gaps. Instead, they focus on certain areas where future action would ensure concrete impact of DRR education activities in vulnerable communities and visible shifts in behaviour.

IV. RECOMMENDATIONS FOR FUTURE PRIORITIES TO ENSURE CONCRETE IMPACT OF FUTURE EDUCATION ACTIVITIES IN VULNERABLE COMMUNITIES AND VISIBLE SHIFTS IN BEHAVIOUR

1. Support for National Strategic Plans for DRR Education

Much effort has been made, and varying degrees of progress achieved, in the integration of DRR into the formal curriculum throughout the region. The same is true for the conduct of co-curricular and community-based activities to promote DRR education. Many teacher training sessions have been organised, especially in areas covered by donor-supported projects. But the still predominantly sporadic nature of progress and the factors behind such state of affairs illustrate that unless countries have a national strategic plan for disaster risk reduction education, significant progress will not be forthcoming. The current work and future plans of some UNISDR system partners have included certain elements that can help countries in the development such a national strategic plan. At the same time, priorities would need to be given to advocating for such a national plan and technical support in its development. The few well-performing countries in the region have attributed their success to the presence of a national strategic plan. Their experience can be tapped into to help other countries in drafting such a plan.

A national strategic plan that spells out critical immediate and longer term objectives, approaches, activities and key actors will put in perspective all the work that is going on, what needs to be done and what additional support is still needed from donors, UNISDR system partners or from other countries. Many nations are in the process of developing their education sector development plan. This presents opportunities for disaster risk reduction education to gain prominence in the national education discourse and to be incorporated into the education sector plan. A country-specific approach to DRR education integration into the education sector plan is important.

The Asia Pacific region's Education Task Force would be more influential in supporting the development of national strategic plans if it effectively expands its membership to include a wider range of actors. Much can be achieved through a broadened and inclusive network of organisations and individuals who are committed to, and active in, disaster risk reduction and who can bring in different experience and skills. Both advocacy and specific technical support will be needed in helping countries to design their national strategic plans for disaster risk reduction education. Success hinges on the convergence of ideas and strength of the ETF members and their extended network.

2. Complementary Options to Mainstream DRR Education

As set out in the Hyogo Framework for Action, knowledge, innovation and education lay the foundation for a culture of safety and resilience. Building such foundation needs to start early, with children. Mainstreaming DRR in the education sector is therefore imperative. To make DRR education part and parcel of the education system necessarily involves adjustment in the curriculum, teacher training, teaching methods, learning materials and extra-curricular activities.

Based on the progress of on-going projects, plans for the future and the gaps identified, it is evident that apart from intensifying efforts in formal education, more emphasis should be placed on achieving synergy of work in both formal and non-formal education. Priority needs to be given to the development of effective strategies for - and the integration of - both approaches, as both are crucial for bringing about change in children's and adults' behaviour. The development of these strategies has been recommended by the Bangkok Action Agenda but insufficient attention has been attached to this.

Non-formal education activities have been conducted on a relatively modest scale using a variety of available methods and materials. Priority should be placed on integrating them with formal education activities, as well as on scaling them up in order to create a critical mass of children and adults who are aware of hazards and well prepared. Children-to-parents communication for disaster risk reduction also needs to be encouraged. What children learn at school can be disseminated at home to their parents and siblings, especially in areas where adult literacy is low. Support should be given to the adaptation, translation, dissemination and wider use of those materials, approaches and practices that have showed promise and good results. Ensuring user-friendliness and availability of information is essential. The documentation of the replication of good practices should be part of this undertaking. In developing strategies for disaster risk reduction education, the needs of children and people with disabilities are to be taken into account.

Opportunities for effectively mainstreaming DRR in the education sector exist. Creative approaches and synergy of action need to be sought. Systematic efforts need to be made to tap into the existing potential of each country's education system. Decentralisation of education and curriculum reform provide promising possibilities for DRR education to be mainstreamed. Local curriculum is being introduced in several countries, Thailand especially. This provides a good opportunity for incorporating disaster risk reduction as well as indigenous knowledge on environment, risk reduction and management. Likewise, the decentralisation of education and curriculum reforms taking place in many Asian countries has called for provincial and district education authorities to include local content in the official curriculum. This is also a way to insert indigenous knowledge as well. It will help avoid situations where DRR education is reduced to an add-on topic of discussion which, as experience with other topics has showed, risks dwindling after some time. The design of projects in basic education and secondary education sub-sectors for funding by such donors as the ADB and the World Bank, as well as the development of the education sector-wide development plan offer the needed channels for DRR education to be integrated.

More attention will need to be given to developing performance indicators of the adequacy and effectiveness of integrating disaster risk reduction into the education curriculum. The indicators will guide the complex process of formalising DRR education through the curriculum. In addition to enhancing advocacy with government and donors, emphasis needs to be on stepping up support at the implementation level to ensure successful results. It is during this period that neglect and challenges of all kinds tend to leave well-designed plans unrealised.

3. Promoting Participatory Approaches in Disaster Risk Reduction Education Programmes

The slow progress in empowering communities and children and building their awareness demonstrates that priority needs to be given to this area. Significantly more support should be given to promoting participatory mechanisms, enhancing women's role and involvement, a bottom-up approach and the quantitative and qualitative upgrade of community-led and child-led projects.

The scarcity of community-led and child-led DRR education initiatives is prejudicing the efforts in other areas such as awareness activities, teacher training and material development. With all good intentions, current projects have not yet been able to mobilise the active participation of local authorities, community members and children. The use of participatory methodology in which they are the decision makers and active participants of DRR education initiatives needs to be made the modus operandi of those initiatives. This implies not only an increase of funding for more community-based and child-led programmes, but also allowing for the proper participatory processes to be conducted, however strong the pressure for quick results. Consultations and joint decision making on all aspects of a programme take time, but shortcuts lead to compromised results and low impact. With the right technique and approach, community participation is entirely achievable, as evidenced by many documented good practices. When the voice of local level actors is heard and their contributions are sought, they feel empowered, take responsibility for the programme and ensure its success. This is the most effective way for changing their behaviour towards disaster risk reduction.

In addition, more emphasis needs to be given to promoting the use of Behaviour Change Communication strategy in all community-based disaster risk reduction programmes if a visible shift in behaviour is to be achieved. This strategy is essential for the awareness raising component of all community-based and school-based DRR programmes. IEC materials, training, conduct of activities, selection of tools and materials need to be organised accordingly. They should also reflect up-to-date information about multiple hazards as well as local knowledge. This calls for more support to be given to improving the flow of information and knowledge from various national agencies to local practitioners and the general public. Two-way communication channels, top-down and bottom-up, are necessary and should be part of information flow improvement.

The use of indigenous knowledge and local wisdom combined with new scientific information is critical for progress in strengthening community resilience. Seeking and utilising local wisdom should be embedded in project design. Likewise for mobilising people with knowledge of local environment issues and good risk management practices as resources people. A considerable amount of indigenous knowledge has been documented, presenting a rich source of knowledge and know-how accumulated through generations and tested over time. So have good practices in disaster risk management. Many elements of these can be used for disaster risk reduction education as well. The focus needs to be on replicating good practices and indigenous knowledge, adapting them to the new local contexts. A systematic documentation of the replication process will facilitate the incorporation of indigenous knowledge in DRR.

4. Building Public-Private Partnerships

According to the United Nations Under-Secretary General for Humanitarian Affairs and Emergency Relief Coordinator, the world is not on track to achieve HFA outcomes by 2015. Accelerated action is urgently needed in which actors at all levels participate and share responsibility.

Both the public and private sectors have high stakes in promoting disaster risk reduction. A disaster can strike anywhere and private enterprises are equally vulnerable. Investment in risk mitigation and reduction effectively results in higher returns in the long run. The private sector has participated in a number of social development initiatives to fulfil their corporate social responsibility. However, such participation is uncommon and there has not been any case reported on the private sector's participation in disaster risk reduction.

There is great potential for deepening the private sector's participation in disaster risk reduction. Hitherto the private sector has, on occasions, supported post-disaster relief and reconstruction. Emphasis needs to be on seeking out possibilities for establishing and multiplying public-private partnerships which emphasise the linkage between sustainable development and disaster risk reduction. Public-private joint-funding of multi-hazard resistant schools, training of teachers and community facilitators, production of DRR learning materials and regular awareness raising events are other possible areas.

The priority is to raise the awareness of the private sector of the DRR concept and the importance of DRR education initiatives. Bringing representatives of the private sector to the discussion table on DRR policy and in planning DRR education projects is essential. Advocacy is needed so that the private sector support is balanced between post-disaster relief and investment in risk reduction. The Regional Task Force for Education and School Safety is well positioned to facilitate the collaboration between the private sector and the agencies concerned with DRR education. It can equally provide a platform for knowledge exchange of public-private partnership success stories and promote their replication throughout the region.

CONCLUDING REMARKS

The last two years have witnessed a considerable expansion of initiatives in promoting the use of knowledge, innovation and education for building a culture of safety and resilience. The momentum created at the World Conference on Disaster Reduction in Hyogo in 2005 is growing. The long journey has started with many steps, small and big, taken by numerous actors at the national and local levels as well as by the international community. However, very important challenges and gaps remain. Urgent action by all stakeholders is imperative for achieving the expected outcomes of the Hyogo Framework for Action by 2015.



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