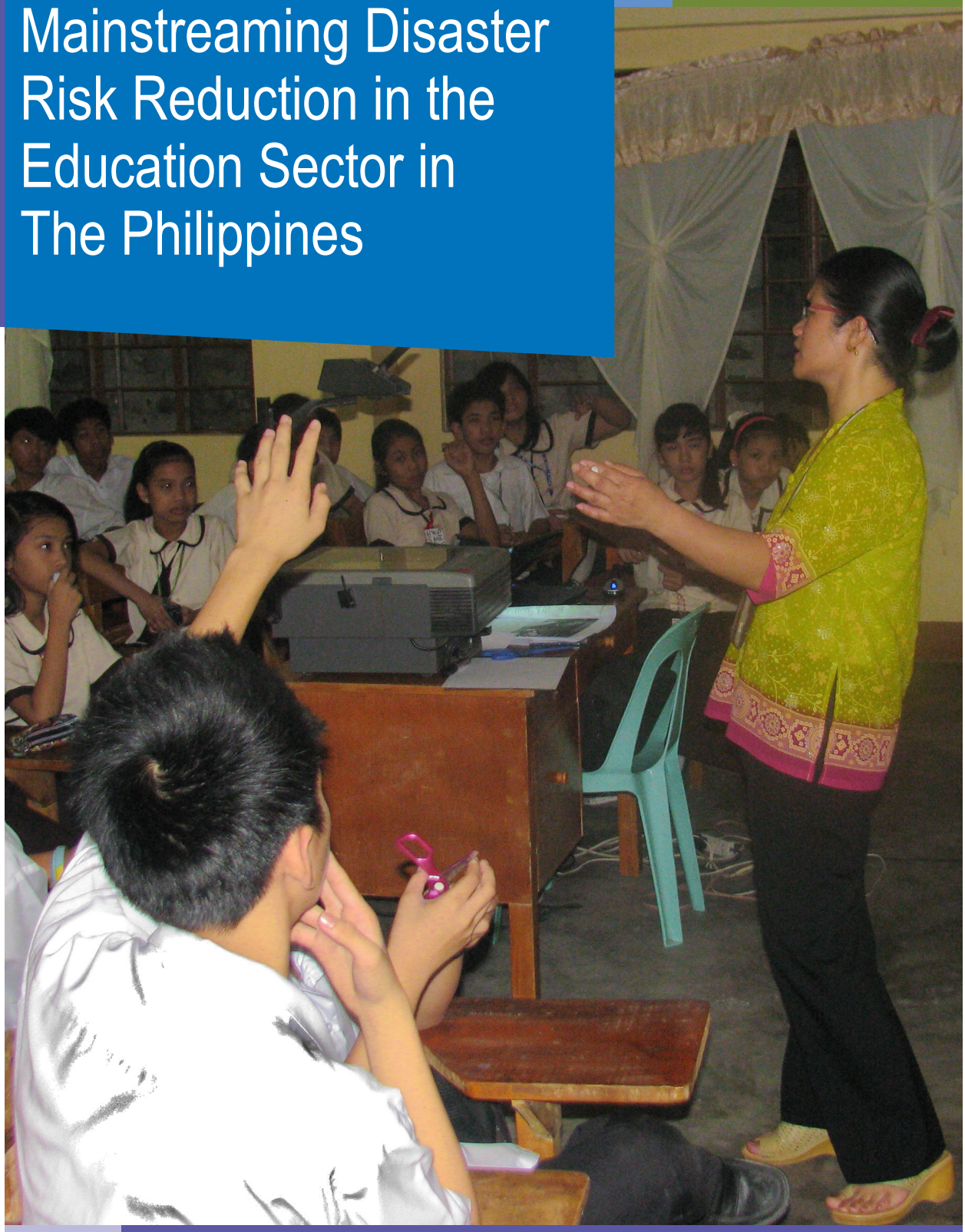
Philippines

Safer Education

Mainstreaming Disaster Risk Reduction in the Education Sector in The Philippines



Support to Implementation of Hyogo Framework for Action through Mainstreaming of Disaster Risk Reduction into Development Planning and Implementation: Advocacy and Priority Implementation Partnership in the Education Sector in 3 South East Asian RCC Member Countries

Under the Regional Consultative Committee on Disaster Management (RCC) Program on Mainstreaming Disaster Risk Reduction into Development in Asia

implemented by

Department of Education (DepEd)

National Disaster Coordinating Council-Office of Civil Defense (NDCC-OCD))

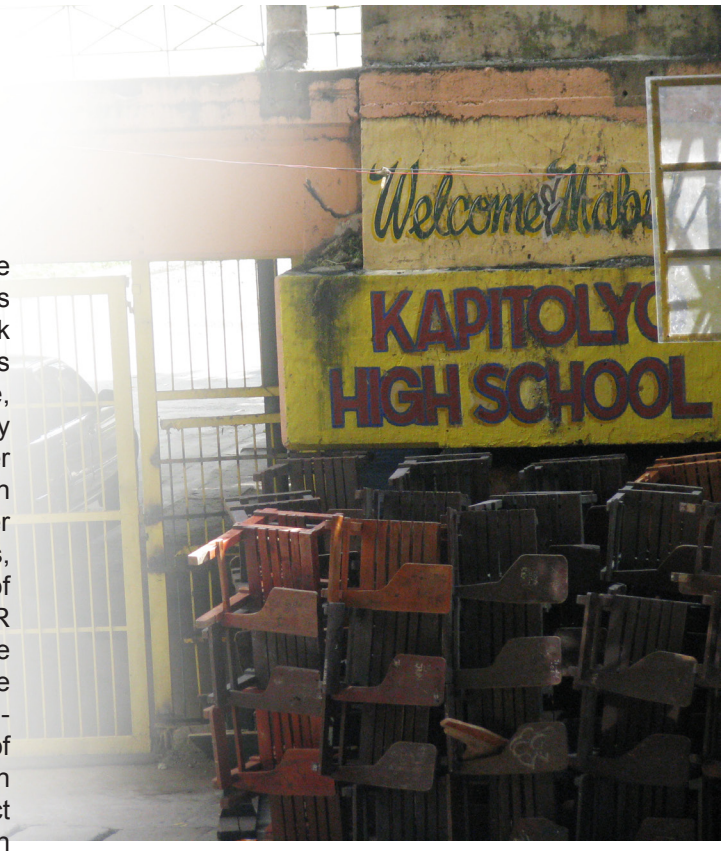
United Nations Development Programme (UNDP)

with support from

Asian Disaster Preparedness Center (ADPC)

European Commission Humanitarian Aid department

Background



The Regional Consultative Committee (RCC) on Disaster Management under its program on Mainstreaming Disaster Risk Reduction into Development (MDRD) has identified Housing, Health, Infrastructure, Agriculture and Education as priority sectors to initiate mainstreaming disaster risk reduction (DRR). In the RCC, which comprises heads of the National Disaster Management Offices of 26 Asian countries, members had submitted expressions of interest to initiate mainstreaming DRR into particular sectors depending on the development priorities of their country. The National Disaster Coordinating Council-Office of Civil Defense (NDCC-OCD) of the Philippines expressed their interest in taking up a priority implementation project (PIP) to mainstream DRR in the Education sector by incorporating DRR into the educational curriculum, and promoting hazard resilient construction of schools. The Department of Education (DepEd) has led the Mainstreaming DRR in the Education Sector (MDRD-EDU) project, together with the NDCC-OCD, ADPC, and UNDP with support from the European Commission Humanitarian Aid department (ECHO). The MDRD-EDU project has already been implemented in two phases: Phase I from January 2007 to April 2008, and Phase II from September 2008 to December 2009.

The Philippines is at risk from volcanic activity, floods, typhoons, and earthquakes including those generating tsunamis. Significant impacts on the education sector are caused by disasters; school buildings are damaged, regular teaching is disrupted for long periods, teachers and students are killed and injured, and students drop out. For example, more than 200 school children were buried alive in the 2006 mudslide in Guinsaugon village on Leyte Island in the Philippines. Additional disruption to school activities during disasters is also brought about by the fact that schools in the country are often used as emergency or evacuation centers. Disaster risk issues are not considered when new school buildings are reconstructed after disasters and so in many cases they are damaged again during later disasters.

Generally, children are the most vulnerable group during disasters, but teaching DRR in schools helps to raise awareness and understanding of not only children and teachers, but of their families and communities as well. Losses from disasters can be reduced by children knowing about disaster risk. At the same time, investing more in strengthening school-building structures before disasters take place would help reduce long term costs, protect children, and ensure educational continuity after the disasters.

Education and DRR in the Philippines

The Philippines has been committed to mainstreaming disaster risk reduction (DRR) into the education sector for some time now. In 2007, the Secretary of the Department of Education (DepEd) issued an order memo to the undersecretaries, assistant secretaries, bureau directors, directors of services/centers and heads of units, regional directors, schools city/division superintendents, and heads of public and private schools to prioritize the mainstreaming of disaster risk reduction management in the school system and ensure implementation of programs and projects related to DRR. So the MDRD-

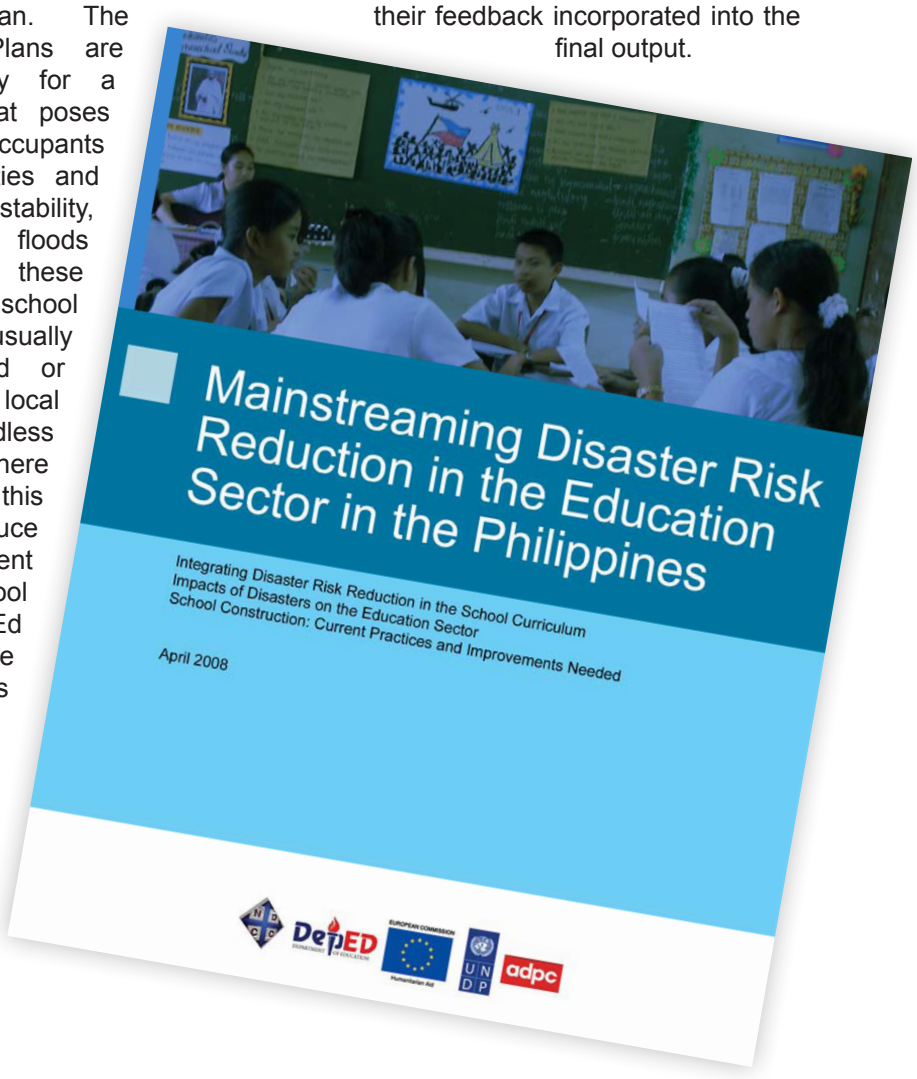
EDU program worked from this strong foundation and commitment.

There is a total of 7,683 secondary schools in the Philippines but unfortunately there has been no systematic documentation on how disasters have affected schools in the past and so there is no data on the number of schools in the Philippines which are at risk from natural hazards. However, data on damages and losses from earthquakes and volcanic eruptions have been collected and show that between 2000 and 2006 the total cost of damage to school buildings as a result of these disasters was 1,279 million US$. Some DRR concepts can be found in existing subjects but there was no formal curriculum related to DRR before this program.

There are good examples of safer school construction in the Philippines; LAPUS (The Learning and Public Use School) Building and UNICEF's Building Safe Learning Environment (BSLE) for Children which are both project oriented. The Principal-led School Building Program (PL-SBP) introduced by the DepEd decentralizes construction management with active participation of the community. There are two types of plans for designs and specifications of public schools under the PL-SBP; Standard Building Plan, and Special Building Plan. The Special Building Plans are designed specifically for a particular school that poses danger for the occupants in cases of calamities and hazards. Soil stability, wind forces, and floods are considered in these designs. However, school site selection is usually dependent on land or lot donations from local individuals, regardless of hazards, and so there is a need to review this system, and to introduce hazard resilient structures for school buildings. The DepEd also needs to improve construction methods and materials.

With DepEd mandated as the agency responsible for providing evacuation centers through school facilities in the Philippines, public schools are primarily used as evacuation centers during disasters. Schools often suffer damage as their usage as emergency shelters is not factored into their design and so their use as such puts a strain on them; facilities are left unclean, and school activities are disrupted. Classes are often suspended temporarily during disasters and some teaching is held in tents when the school is being used as an evacuation center. Teachers are also affected by disasters; they are mandated to assist during emergencies and therefore might be tired and emotionally affected as well as struggling to teach children with lower concentration levels in uncomfortable temporary classrooms. Following a disaster, teachers and students often spend longer hours at school such as at weekends or extending class hours to complete the lessons that have been missed.

The study Mainstreaming Disaster Risk Reduction in the Education Sector in the Philippines (below), published in 2008, was carried out as part of this project to determine the impacts of disasters on the education sector in the Philippines. Relevant stakeholders; ministries, UN agencies and NGOs were consulted during the development of the drafts and their feedback incorporated into the final output.



Key Results

Technical Working Group (TWG) and engagement with the Education Working Group (EWG)

A project Technical Working Group (TWG) was formed by the DepEd and the NDCC-OCD at the beginning of the project to effectively implement the MDRD-EDU. At the start of Phase 2 of the MDRD-EDU project, the TWG was expanded to enhance the mainstreaming of DRR issues into the education sector.

Members of the expanded TWG	
DepEd Office of the Undersecretary for Teachers' Welfare	Philippine Institute of Volcanology and Seismology (PHIVOLCS), Department of Science and Technology (DOST)
Bureau of Secondary and Elementary Education, DepEd	Philippine Atmospheric, Geophysical and Astronomical Services (PAGASA), DOST
Bureau of Alternative Learning System, DepEd	National Mapping and Resources Information Authority (NAMRIA), Department of Environment and Natural Resources (DENR)
Physical Facilities and Schools Engineering Division, DepEd	Mines and Geosciences Bureau, DENR
Basic Education Support and Reform Agenda (BESRA) Secretariat, DepEd	Office of the Presidential Advisor on Climate Change (OPACC)
National Economic Development Authority (NEDA)	Department of Public Works and Highways (DPWH)
Department of Finance (DoF), DepEd	Philippine Information Agency (PIA)
NDCC - OCD	ADPC

An advocacy workshop was held in March 2008 to raise awareness and commitment of DepEd and other related ministries in mainstreaming DRR into the education sector. The workshop aimed to raise awareness of planning and development officials of the cost-effectiveness of DRR in the education sector by showcasing the success of the project activities and by highlighting the need for hazard resilient construction of school buildings.

Initial discussions with the members of the Education Working Group (EWG) in the Philippines were also undertaken by the TWG to promote the integration of DRR in the broader education agenda of the country. The EWG in the Philippines aims to assist the DepEd in implementing its Basic Education Reform Agenda (BESRA). The EWG is under the Philippines Development Forum (PDF) which is the government's main mechanism in bringing various stakeholders for substantive policy dialogues relating to the country's development agenda. The EWG consists of AusAID (co-chair), USAID, WB, CIDA, and UNICEF, Save the Children, Plan International, and Children International. In the bilateral discussions with a number of EWG members, they have indicated that as long as DepEd takes the lead in the integration of DRR in the broader education agenda of the country, then they would support the initiative.

Development of DRR curriculum materials

The DepEd and the TWG decided that integration of DRR topics into subjects already taught would be more effective than creating a new subject; it was felt that this approach would make it easier for the children to understand the subject. In the Philippines, this mainstreaming DRR project complements the other government school projects, such as integration of global warming and food security into the education curriculum.

A DRR student/teacher module for Grade 7 (First Year High School) was developed

in the subjects Science and Social Studies. Lesson exemplars for each subject were also developed to guide the teachers in the delivery of the modules. Each includes group activities to motivate students, questions to be asked by the teacher, and methodologies to evaluate student learning. The Science module and lesson exemplar cover: hazards, particularly heat wave, fire, landslide, earthquake, volcanic eruption, tornado, tropical cyclone, floods, storm surge, tsunami, global warming and climate change; preparedness such as disaster supply kit, family disaster plan. The entire module tackles also prevention/ mitigation and safety measures, i.e. what to do before, during, and after a hazard. The Social Studies module and lesson exemplar contain: environmental pollution, global warming and climate change, floods, red tide, structure collapse, and energy crisis.

Tales of Disasters. Handbook: A Facilitators Guide for using the No Strings Tales of Disasters Films

The development of the DRR curriculum materials for Grade 7 incorporated input from experts from the different government agencies who are part of or serve as technical support to the TWG. The DepEd enhanced the lessons exemplars and student/teacher modules based on the technical inputs of the agencies in a workshop held in April 2009. The inputs of the agencies went beyond the workshop as they continued to review and provide inputs to the revised drafts and approved the final version of the documents that were then submitted to the Instructional Materials Council-Secretariat (IMCS) of the DepEd which is the authority tasked to approve the printing and circulation of DepEd educational materials for national use.

Existing IEC (Information, Education and Communication) materials developed by government agencies and NGOs in the country were also reviewed during the workshop and were used as the basis to select DRR teaching aids to complement the student/teacher modules and the lesson exemplars in Science and Social Studies. During the review, the Tales of Disasters, a DVD developed by DepEd with Plan International and the members of the Education Cluster in Emergencies with support from No Strings International and Trocaire was chosen as one of the teaching aids for reproduction. The handbook of the DVD which guides the teachers in the use of the DVD has also been enhanced by Plan and ADPC. The DVD contains short films on five natural hazards and a film on peace building and conflict resolution concepts that can be used to open up group discussions. Another teaching aid that was chosen by the TWG is the landslides booklet of the Mines and Geosciences Bureau of the Department of Environment and Natural Resources. The booklet is published in the Tagalog language of the country.

The DepEd's IMCS has approved and endorsed the DRR curriculum materials (i.e. modules, lesson exemplars, teaching aids) as official teaching materials for national use.

Training of teachers and trainers (ToT) and pilot testing

A training of teachers and education supervisors (ToT) was provided to enable them to use the DRR curriculum materials for Grade 7. In Phase I, teachers from 17 regions, and representatives from NDCC-OCD, MGB, PHIVOLCS, PAGASA, BFP, PNP, Department of Health (DoH), and the Philippine National Red Cross (PNRC) participated in the training. During Phase II, teachers and education supervisors for Grade 7 on Science and Social Studies subjects coming from five regions were trained on the use of the materials. The education supervisors are responsible for the annual in-service training of teachers in the country.

For Phase I, over 2,600 students were taught the DRR module in the pilot schools in Southern Leyte (Visayas), Albay (Luzon) and Basilan (Mindanao). Teaching of the curriculum material on DRR has been carried out with a range of teaching methods, including the use of songs, competitions, posters and plays. Teaching of the DRR modules was monitored by curriculum specialists from DepEd, NDCC focal point, and TWG members visiting the pilot schools. In Phase II, 2,600 more students were taught in the five regions, covering the DepEd divisions of Pasig, Navotas, Albay, Leyte, Southern Leyte, Ormoc, and Butuan City. In both phases, teaching effectiveness was evaluated. During the School Safety Days which were conducted in Phase I, students from other classes in the pilot schools also participated in the activities such as hazard hunts, quizzes, and poster painting competitions. Evaluation of learning of DRR was also conducted during the National Advocacy workshop where representatives from pilot schools participated in a poster painting competition. During Phase II, observation forms to evaluate teachers were developed by DepEd.

Development of Curriculum Framework Plan for integrating DRR in all grades

It was recognized that there was a need to develop an overall framework plan to guide the full integration of DRR in the school curriculum in the Philippines. The project helped to analyze the National Curriculum for all grades and identify opportunities for integration of DRR topics in the future. A workshop was held in December 2009 to:

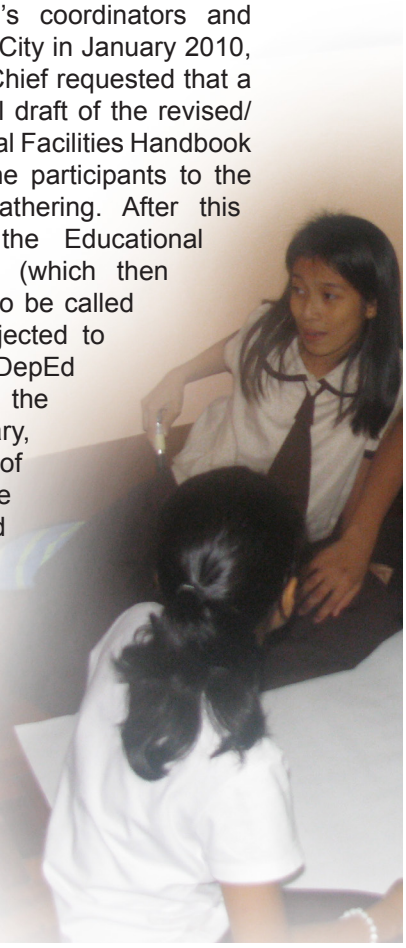
- Review the learning competencies in selected subjects in primary and secondary grades, and in the Alternative Learning System and Technical Vocational courses
- Identify possible DRR concepts that could be developed into modules given the learning competencies in the selected subjects.

In the review-workshop, the Bureau of Elementary Education (BEE), the Bureau of Secondary Education (BSE), the Bureau of Alternative Learning System (BALS), and the Bureau on Technical-Vocational courses (Tech-Voc) worked closely with the TWG members. The matrices from the BALS and Tech-Voc indicate that DRR is currently integrated in a number of teaching materials/ textbooks that they are currently using in the country. For the BEE and BSE, DRR topics (to be developed as modules) were identified by the participants based on the learning competencies set by the DepEd for each grade level in each subject from primary to secondary. The Curriculum Framework Plan has been finalized by each bureau as one integrated document. The Center for Disaster Preparedness (CDP) and Plan International worked with the DepEd participants in the identification of DRR concepts for future integration in the curriculum.

Integrating hazard resilient school construction features

The need for improved hazard resilience of school construction was identified as a priority both by the RCC and the national government. The Physical Facilities and Schools Engineering Division (PFSED) of DepEd led two workshops to enhance the current school construction guidelines of the country known as the Educational Facilities Handbook. A review team comprising of DepEd's architects and officials in the PFSED, and technical experts from the PHIVOLCS and DPWH initially enhanced the existing guidelines, incorporating multi-hazard concerns in the document during the first workshop in April 2009. A second review workshop was attended by participants from DepEd PFSED, Plan International, and the Philippine Green Building Council. In this workshop, climate change adaptation was integrated in the enhanced guidelines.

In addition, in an activity gathering of all the DepEd PFSED's coordinators and engineers in Baguio City in January 2010, the DepEd PFSED Chief requested that a validation of the final draft of the revised/ enhanced Educational Facilities Handbook be undertaken by the participants to the DepEd PFSED's gathering. After this validation activity, the Educational Facilities Handbook (which then was recommended to be called a Manual) was subjected to the approval of the DepEd Undersecretary, the Assistant Secretary, and the Secretary of the department. The approved enhanced Educational Facilities Manual binds donors to comply with the standards set for school construction in the country.



WAY FORWARD

Significant progress has been made in mainstreaming DRR into the education sector in the Philippines. The implementation of the MDRD-EDU program has demonstrated the need to upscale, consolidate and disseminate the activities in the region and so further activities are proposed to do this. Based on lessons learned from previous phases and recommendations following evaluations, the proposed activities for an additional phase are outlined below.

Institutionalization within the Education sector

Emphasizing DRR in the broad national education agenda of the country ensures the integration of DRR into the education sector. Significant progress has already been made on mainstreaming DRR into the education sector. DepEd has committed itself to this direction with the release of a department order in 2007 prioritizing DRR mainstreaming in education. Supporting the DepEd and the ESWG on integrating DRR in the Education Sector Plan can strengthen and ensure the full institutionalization of DRR in the broader education agenda. The partnership between the ESWG and the TWG is vital in this respect.

Teacher Training System

There is a need to strengthen the Teacher Training System to deliver the DRR curriculum materials. The capacities of the teacher-trainers need to be strengthened for technical understanding of hazards, and prevention and mitigation measures. Capacity also needs to be strengthened on the teaching and pedagogical strategies and skills used to effectively deliver the curriculum materials to their students, considering varied learning intelligences of students and other factors such as gender and disability. There are over 200,000 teachers who need training so there is a need to upscale the ToT component of the program.

Further DRR module and Curriculum Framework Plan

It is recognized by the pedagogical experts of DepEd that it is essential to upscale the DRR module development to another grade in secondary school. DRR topics have been introduced into one grade so far, thus the Philippines has expressed the need to expand the teaching of the DRR topics to one more grade in secondary school. The Curriculum Framework Plan could guide the selection of priority grades for integration of DRR into the curriculum.

Implementation of hazard resistant school construction guidelines

With an enhanced school construction manual approved by the DepEd, the support needed now is to train technical officers from various stakeholder groups engaged in school construction on the use of the manual as well as on technical knowledge and skills in incorporating hazard resilient features and measures to ensure safe schools in the country.

Raising awareness of officials from the PFSED and other related departments such as the Public Works and Highways needs a strong advocacy to bring a shift in focus from disaster response to investing in disaster resilient construction for long-term sustainable development. There is also a need to link DRR and safer school construction with the long-term education agenda, which needs to be addressed by the senior policy makers of DepEd.

Training and knowledge sharing

The project aims to conduct a regional knowledge sharing forum among the three partner countries (Cambodia, Lao PDR and the Philippines) and all other DIPECHO funded South-east Asian countries on their experiences and lessons learned in promoting safe schools to further build capacities of those involved. A regional training course on Mainstreaming DRR in the Education sector is also recommended to be conducted as a final consolidation activity of this project.

Layout by: Lowil Fred Espada

For more information, please contact:

Department of Education (DepEd)

Undersecretary Antonio Inocentes
Office of the Undersecretary for Teachers' Welfare
Email: *aainocentes@yahoo.com*

Ms. Candelaria F. de Juan
Administrative Unit Head, PFSED-OPD
Email: *famero_candy@yahoo.com*

National Disaster Coordinating Council
Office of Civil Defense (NDCC-OCD)

Mrs. Crispina Abat
Chief of Planning
Email: *crispinab.abat@yahoo.com*

Asian Disaster Preparedness Center (ADPC)

Aloysius Rego
Deputy Executive Director
Email: *Ajrego@adpc.net*

Ronilda Co
Project Manager
Email: *ronilda@adpc.net*

ADPC 2010

Regional Consultative Committee on Disaster Management (RCC)

The RCC comprises of members who are working in key government positions in the National Disaster Management offices of countries of the Asian region. To date, 26 countries are represented by 30 RCC members from the Asia and Pacific regions, namely, Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, China, Georgia, India, Indonesia, Iran, Jordan, Kazakhstan, Korea, Lao PDR, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Sri Lanka, Thailand, Timor Lesté and Vietnam.

RCC Program on Mainstreaming Disaster Risk Reduction into Development Policy, Planning and Implementation in Asia (RCC MDRD)

A key priority identified by the RCC is the integration of DRR into development process. To initiate action on this agreed direction, the RCC program on Mainstreaming DRR into development policy, planning and implementation (MDRD) was launched at the 4th RCC meeting in Bangladesh in March 2004. The RCC 5 adopted the Hanoi RCC 5 statement on Mainstreaming DRR into Development in Asian countries which prioritizes mainstreaming of DRR to be initiated in national development planning process as well as sectoral development. It identified priority sectors namely Agriculture, Education, Health, Housing and Infrastructure for mainstreaming of DRR. The program has five components for implementation:

1. Partnerships for mainstreaming disaster risk reduction into National Development Planning processes;
2. Priority Implementation Partnerships (PIP) on mainstreaming disaster risk reduction into sector development;
3. Advocacy for Building awareness and political support for mainstreaming disaster risk reduction into development policy and planning;
4. Knowledge management platform for mainstreaming disaster risk reduction: Showcasing good practice and lessons learned; and
5. Capacity development for mainstreaming of disaster risk reduction into development of national and sectoral ministries, technical institutes, private sector and NGOs in RCC member countries.

This document highlights the experience of undertaking a Priority Implementation Partnership (PIP) on Mainstreaming DRR in the Education Sector in Cambodia, implemented by the Ministry of Education, Youth and Sports (MoEYS), together with the National Committee on Disaster Management (NCDM), Asian Disaster Preparedness Center (ADPC), United Nations Development Programme (UNDP), and with support from the European Commission Humanitarian Aid department (ECHO).