

RCC Guideline 6.1

Integrating Disaster Risk Reduction into School Curriculum

Mainstreaming Disaster Risk Reduction into Education



under the Regional Consultative Committee on Disaster Management (RCC) Program on Mainstreaming Disaster Risk Reduction into Development (MDRD)



Regional Consultative Committee on Disaster Management (RCC)



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1. Why teach Disaster Risk Reduction in School?

Numerous examples across the globe show that children are more vulnerable to disasters. But at the same time they can be influential and effective communicators about disasters. Often, lessons learnt at school are later transmitted to the home.

An example is of the young Tilly Smith, who seeing the receding water before the tsunami could remember her geography lessons on tsunami and was able to save the lives of 100 tourists from a beach in Thailand in December 2004. There is another example, from Yogyakarta which highlights the value of children teaching their parents about 'What to do in case of an earthquake' (Box 1)

There are many other documented occasions when the safety of a family, or the protection of an important element of the household, have been traced back to a "safety lesson" learned at school. Introducing disaster awareness and risk reduction education in the school curriculum would foster better understanding amongst the children and the teachers

about the immediate environment in which they and their families live and would help to reduce the risk faced by the community.

Box 1

Parents learn from children

Education authorities of Indonesia along with GTZ have developed materials and taught more than 33,000 school children about the causes and results of earthquakes, tsunamis and volcanic eruptions. The impact of this initiative was demonstrated at in May 2006, when an earthquake hit the Yogyakarta region of Indonesia. Although 5,000 people lost their lives, the figures would have been much higher had the children not learned at school what to do in the case of an earthquake, and had they not passed this knowledge on to their parents. The families sought protection in doorframes, under tables and under beds, and did not leave their houses until the quake was over. Such families escaped serious injury.

(Source: Disaster Reduction: Knowledge, Transfer, Practice, Proceedings of the 7th Forum and Disaster Reduction Day, 2006, GTZ)

2. Integrating DRR into school curriculum is possible; good practices from RCC member countries

Many RCC member countries such as Bangladesh, Cambodia, India, Indonesia, Iran, Maldives, Lao PDR, Nepal, Pakistan, Malaysia, Philippines, Sri Lanka etc have either already integrated DRR into the school curriculum or are in process of completing the integration, or are initiating.

But depending on the policy decision of the educationists of the country, often the method of integrating differs from country to country. Sometimes DRR is integrated as an independent subject. Often the concepts of DRR are taught by combining with portions and specific chapters of other subjects such as environmental studies, geography, science, etc.

For e.g. in India, the Central Board for Secondary Education has introduced disaster management as a separate subject in grades VIII, IX and X and in Lao PDR 'Disaster Reduction' is taught in the primary grades of 3 to 5. (See Box 2)

Box 2

Successful integration of DRR into school curriculum: experience of India and Lao PDR

Disaster Management into School Curriculum of Central Board for Secondary Education, India (<http://www.cbse.nic.in>)

The Central Board for Secondary Education in India has introduced Disaster Management as a separate curriculum for standard VIII from the academic year 2003-2004, IX from 2004 – 2005 and standard X from 2005-2006. The various activities taken up by the Board for achieving the target included-

- Module Development
- Circular on school safety
- Awareness generation in form of painting competitions, exhibitions, debates and essay competitions
- Development of Standard VIII, IX and X textbooks

The course content focuses on

- For Standard VIII – Preparedness measures to be taken by students and teachers for various hazards
- For Standard IX – On Mitigation measures
- For Standard X –Focus is on-
 - Role of Government and other agencies in DM
 - Role of Science and Technology in DM
 - Initiating the concept of volunteerism among children

For the Primary classes DM has been integrated in form of extra curricular activities like Plays, Painting Competitions. Training of teachers on DM course curriculum has also been carried out. The Ministry of Home Affairs has also directed the States to introduce DM in their school curriculum.

DRR in Primary Education in Lao PDR

From 2001 to 2003, National Disaster Management Office (NDMO) and National Research Institute for Educational Sciences, Ministry of Education in Lao PDR, with support from ADPC and funding from DANIDA implemented the Disaster Reduction Program; DRP-CLV (under the larger program of the same name implemented in Cambodia, Lao PDR and Vietnam). The project looked into developing improved disaster risk communication strategies aimed at reducing community level disaster risk. The highlight of the project in Lao was the development of school curriculum for Grade 3, 4 and 5. Following project outputs were achieved.

- Development and production of textbooks on "Disaster Reduction" for elementary school grades 3, 4 and 5 (in local language as well as in English). The contents cover information on the causes, preparedness and what to do during a disaster. The disasters discussed are fire, flood, drought, pollution, road traffic accident and social disorder.
- Tested the textbook for a pilot of approximately 750 primary school children (grades 3-5) in 10 schools in the two most flood prone provinces of Khammoune and Savannakhet.

In Pakistan, a program has been introduced to develop curriculum for schools, colleges and universities on disaster risk management particularly in hazard prone areas. The National Disaster Management Authority (NDMA) has engaged the Ministry of Education to include elements of DRR in the education system and to mobilise all stakeholders, including government, communities and the private sector, to ensure that DRR is fully integrated into school curricula.

In Sri Lanka under the Asian Urban Disaster Management Program, the National Institute of Education in Sri Lanka had integrated Disaster management aspects in the subject of Geography for secondary schools. Currently with support of GTZ, the Ministry of Education is implementing the program on School Based Disaster Risk Management. (See Box 3)

Box 3

Ongoing initiative in Sri Lanka to integrate DRR into School curriculum

School Based Disaster Risk Management in Sri Lanka

Following the 2004 Tsunami, in response to the expressed need to integrate disaster risk management concepts in education system, and as the continuation of "Basic Education Sector" program of GTZ-Sri Lanka in association with Ministry of Education, the Government is developing a program for "School Based Disaster Risk Management" as a component of the program for "Education for Social Cohesion (2005-2010)". Two workshops were held in Colombo and Kandy respectively in May and September 2005. Representatives from the Ministry of Education, National Institute of Education (NIE), GTZ, the ADPC, Center for Housing Planning and Building (CHPB), and other partner institutions such as World Vision-Germany, Save the Children and UNICEF-Sri Lanka attended the workshops. The project approach is to implement the activities under the following three areas:

- Development of a School Curriculum for Disaster Management
- Training of Teachers for teaching the curriculum
- Building a Culture of Safety: Awareness at school level and development of school level Crisis Management Plans

The Project Activities for Integration of DRM into existing School Curriculum included-

- Design and development of Strategy Paper to be submitted to MoE for approval
- Formation of an Advisory Group, containing representatives from GTZ and NIE for the overall monitoring and evaluation of the project
- Analytical Study of level of understanding of teachers and students on Disasters and their Risks
- Conducting a series of One day consultative workshops
- Formation of an advisory panel for curriculum development
- Review and Revision of Existing School Curriculum
- Pilot testing in selected schools
- Review and revision of Teacher's Education curriculums and Teachers' Guides (teaching materials)

3. Mainstreaming DRR into School Curriculum: Key Approaches

Key Approach 1: Plan in advance of the National Curriculum Development Cycle

In every country the curriculum revision exercise is repeated every few years. The cycle of revision usually varies from 3 to 5 years. The Department of Curriculum (or Pedagogy) within the Ministry of Education is responsible for curriculum revision. The revision is conducted over a number of years grade by grade. The actual process of revision is a long process and starts a year before the actual revision takes place, for each grade. Any new curriculum, whether it is a new subject or a revised content of the existing subject, can only be taught from the beginning of the new cycle and once approved by the Ministry of Education. (See Box 4 for e.g. of Cambodia)

Hence in order to successfully integrate disaster risk reduction into the national curriculum system, the beginning of the new curriculum cycle is the best stage to commence activities.

Thus, it is essential to be aware of the National Education Policy and the curriculum revision cycle, and plan ahead, so that necessary steps can be taken to introduce disaster risk reduction concepts to the curriculum development board before or during the actual revision phase. This would provide enough time for the concerned agencies to develop a relevant curriculum related to disasters, train the teachers and also pilot test the curriculum so that any necessary revision could be carried out before the curriculum is actually adopted for teaching nationwide.

Box 4

Curriculum revision in Cambodia

The core school curriculum for Cambodia has been developed in the year 1996 and in 2004 the ***Pedagogical Research Department*** (under the Ministry of Education Youth and Sports), the national agency responsible for preparing the School Curriculum, has prepared the ***'Policy for Curriculum Development 2005-2009'*** which states the policy for upgrading and improving the 1996 core curriculum. This policy has been designed for a period of five years 2005-2009 and will be reviewed in 2009 for another five years i.e. for the period 2010-2014.

Another key issue is that any change in curriculum has budgetary implications. Change in the curriculum results in increase in teaching time and increase in corresponding costs of teaching and printing of textbooks. An ideal plan would provide the curriculum revision board with sufficient time to place the revisions in forthcoming education sector plan, so that budgetary arrangements are in place to cater for the increase in teaching costs necessitated due to the revision of the curriculum.

Key Approach 2: Establish Partnerships between Ministry of Education and NDMO

The National Disaster Management Office (NDMO) is the national agency mandated with the task of disaster risk reduction. Though in most of the RCC Member countries the Ministry of Education is usually a member of the NDMO

Box 5

Roles for MoEYS related to DM in Cambodia

The Policy Document of the National Committee for Disaster Management states the following tasks for the Ministry of Education, Youth and Sports (MoEYS)

- Establishing an Emergency Management Unit in the Ministry which is responsible for developing and administering policy and which supervises the emergency-related activities of the departments, bureaus, offices and agencies under it, as well as all other institutions and agencies working in the sector.
- Establishing national policy, operational plans, training curricula and material as well as guidelines for damage and needs assessments to be conducted by agents working in the sector.
- Organizing Emergency Response Teams in all schools, institutions of learning and educational establishments.
- Making school buildings in the affected areas available as evacuation centers.
- Assisting in the public education campaign through integration in the school curricula of subjects related to emergency management, hazards and precautionary measures

(Source: Policy Document, NCDM, 1995)

and the National Disaster Management (DM) policies do provide a definite role for the Ministry, their involvement is usually restricted to disaster response, particularly in schools acting as emergency shelters during a disaster. (See Box 5 for e.g. of Cambodia)

It is essential to ensure that the National DM policy highlights the need for integrating disaster risk reduction into the national curriculum and assigns the responsibility to the Ministry of Education.

Though the process of integration should be led by the Ministry of Education, the NDMO should provide technical support to the Ministry as well as help in sourcing funds to initiate the process. This is of particular importance because financial resources are often a constraint for the Ministry of Education to take up such integration against other competing sectoral priorities.

In the entire process the NDMO could also play a vital role in advocating for the integration of disaster risk reduction into the education curriculum and help generate political will in initiating such integration.

This approach has been adopted under the ongoing Priority Implementation Partnerships (PIP) on Mainstreaming DRR into Education Sector of the RCC MDRD Program, being implemented by the RCC Secretariat in partnership with UNDP and ECHO in Cambodia, Lao PDR and the Philippines.

Key Approach 3: Adopt a consultative process

The need for partnership between Ministry of Education and NDMO in order to successfully integrate DRR into school curriculum has been highlighted. Of equal importance is the need to build a consensus and adopt a consultative process by involving key agencies who are involved in development of the education sector plans.

This reiterates the need to involve key national agencies such as Ministries of Planning and Finance since the whole process of curriculum change is linked to the development plan and the budget of the nation. Consultations should also be completed with specific national hazard related technical agencies and research institutes.

Apart from the national agencies, there are various international agencies like UNICEF, UNDP and UNESCO, and donors like GTZ, ECHO, JICA etc who are specifically involved in education sector development.. Involvement of the civil society along with non-government organizations such as the Red Cross Society is a must as they are often involved in educating communities on disaster risk reduction.

This broad approach of consultative process is adopted in the ongoing PIP in Cambodia, Lao PDR and the Philippines being implemented under RCC MDRD Program. Box 6 provides details on the working groups formed under the project in each country to integrate DRR into the school curriculum.

Box 6

Constitution of technical working groups in Cambodia, Lao PDR and the Philippines to integrate DRR into school curriculum

Cambodia

- Ministry of Education, Youth and Sports (MoEYS)
- National Committee for Disaster Management (NCDM)
- Pedagogical Research department, MoEYS
- Education Sector Support Project, MoEYS
- UNDP- Cambodia

Lao PDR

- National Research Institute for Educational Science (NRIES), MOE
- Office of *National Disaster Management Office* (NDMO)
- Save the Children, Australia
- UNDP- Lao PDR
- Save the Children Australia

Philippines

- Depart of Finance
- Department of Education (DepED)
- National Economic Development Authority (NEDA)
- Public safety and Emergency Management office, MOP
- Office of National Disaster Coordinating Council (NDCC)
- UNDP- Philippines

Key Approach 4: Link with processes of the Education sector programs funded by the multilateral and bi lateral agencies; and the Education sector Working Group led by Ministry of Education

Countries have a number of projects for development of curriculum, construction of schools, publication of textbooks, etc. These may be projects in the pipeline or on-going projects. An opportunity would be missed if any new activity is done by

Box 7

Education Sector Programs- a window of opportunity

Education Reform in Mongolia

To support education reform, ADB has helped finance the Education Sector Development Program in Mongolia to match the changing requirements of an economy in transition from central planning to market-oriented system. To attain this objective, the program aims to upgrade the quality, performance, and sustainability of the education sector, and improve educational management capacity. The investment project helped (i) strengthen education management and capabilities at central, local, and institutional levels, (ii) improve coordination of management and academic development in higher education; and (iii) upgrade quality and relevance in educational content at upper secondary and higher education levels. Integration of DRR at this stage is an opportunity to enhance the impact of the ADB project.

Curriculum development in upper secondary level, Lao PDR under JICA program

From November 2005 to 2009 JICA is developing curriculum for higher secondary level in Science and Math subject and developing teacher's guideline on these module guided by Japanese consultant and researcher who are members of Japanese secondary school curriculum development team in Math and Science. In close collaboration with Ministry of Education, JICA had planned to upgrade Math and Science curriculum for Grade 10 in Lao. Integration of DRR concerns at this stage could help double the benefits from the investment from JICA.

a country without integrating DRR concerns. JICA has funded development and printing of textbooks in Cambodia. Such projects can be an opportunity to ensure integration of DRR concepts in the textbooks before the printing. The benefit from a program can be enhanced in this manner. Box 7 provides some examples of Education sector programs funded by bilateral and multilateral agencies.

Often projects are implemented in selected provinces and districts by multilateral and bilateral agencies. A component of this project may focus on communicating DRR concepts to school children. This can be an opportunity to experiment with curriculum development and to test a curriculum which has been developed in these areas. E.g. Save the Children Australia has planned school based activities in selected schools in Sayaboury province of Lao PDR under the LANGOCA project. Under the ongoing RCC MDRD Education project the draft DRR curriculum has been developed and Training of Teachers was conducted 27-29 September 2007. During the training 2 teachers from Sayaboury under the LANGOCA project also participated. It has been discussed with Save the Children some activities for the curriculum would be developed under LANGOCA. This is another example of tapping the potential of another program to magnify the benefits.

4. Suggested steps for undertaking Priority implementation Partnerships (PIPs) for mainstreaming DRR into school curriculum (Year 1 and 2)

The following steps are suggested for a successful integration of disaster risk reduction into school curriculum. The process draws on lessons learned from past experiences of RCC member countries who have successfully integrated DRR into school curriculum and particularly from the ongoing process in Cambodia, Lao PDR and the Philippines, under the Priority Implementation Partnership (PIP) on Mainstreaming DRR into Education, being implemented under the RCC MDRD program.

Step1 Initiating Dialogue between NDMO and National Institute of Education and it's Curriculum Development Department, Ministry of Education

It is advisable that the NDMO establishes communication with the Ministry of Education, and particularly with the national agency responsible for the development of school curriculum. A workshop could be organized under the leadership of the NDMO for the officials from Ministry of Education to introduce the topic and get their consensus on the process. The main outcome of the workshop could be a formal memorandum of understanding (MOU) to (i) set out the objectives, scope and expected outcomes of the partnership between the NDMO and the Ministry of Education and (ii) name the members of the technical working group.

Step2 Formation of Working Group and Advisory Group

Based on the MoU between the NDMO and Ministry of Education, it is advisable to set up a technical working group with members from the Department of curriculum development of Ministry of Education, NDMO and other relevant technical agencies involved in curriculum development.

It is also advisable to form an Advisory Group, chaired by a senior representative of the Ministry of Education to oversee and guide the process. The advisory group should be represented by staff from all concerned government agencies like NDMO, Ministry of Planning and Finance, Ministry of Health, Ministry of Sports and Youth, Ministry of Transportation, Research and academic institutes, hazard specific technical agencies and other stakeholders involved in education sector like UNICEF, UNESCO, development agencies and banks, NGOs and the Red Cross Societies. It could be an education focus sub committee of NDMO or a disaster related subcommittee of the Education Sector Working Group.

Step3 Priority Implementation Partnership (PIP) Kick off Meeting

The process could start with organizing a kick off meeting of the technical working group as well as the advisory group. The meeting would provide guidance in detailing out the work plan of the working group, assign responsibilities for agreed actions and proposed target dates for their achievements.

It is also essential at this stage to map out the various past initiatives in DRR in the country to avoid duplication and learning from the experience. The possible key points to be discussed at the project kick off meeting are highlighted in Box 8.

Review of the action plan, analysis of successes and failures, and adjustments of targets in the light of lessons learned would then be the regular business of the advisory group.

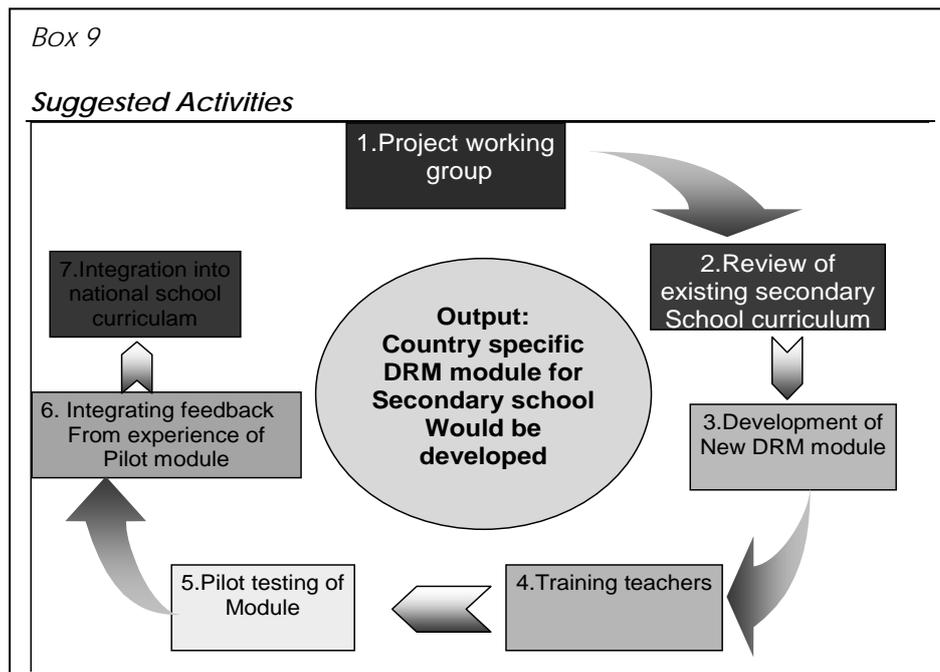
Box 8

Key points for discussion at PIP kick-off meeting

- DRR to taken up as a new subject or integrated in existing subjects?
- If to be integrated in existing subjects, which are the possible subjects?
- What should be the target grades for initiating the process? Do we adopt a phased approach of introducing in one grade at a time?
- What is the time line of the curriculum revision cycle and the planned activities under it?
- Are we keeping in mind the annual school calendar while designing the work plan? The time of school vacation is often the best time to get involvement of the school principals and teachers and the exam time often not an ideal time.
- What impact would the integration have on the provincial and district system of education in terms of budget, staff capacity and what necessary actions should be taken to facilitate the process, in terms of capacity building of teachers
- Align the work plan in close dialogue with the Department of Planning under the Ministry of Education since they are responsible for developing the annual education development plan

Step4 Develop and test the draft curriculum

The technical working group would carry out the activities according to the work plan. Box 9 shows suggested activities to achieve the objective of integration.



Step 4a Review existing curriculum

The first task would include reviewing the existing school curriculum and arrive at a consensus on which grade and subjects to integrate DRR.

Step 4 b Develop new DRR subject/module

Based on the review the project working group would develop either the new DRR subject or a module for integrating DRR in different subjects. During this stage it would be helpful to consult with other RCC Member countries that have successfully carried out such integration and review their curriculum material. Box 10 provides details from the ongoing project in the RCC member countries of Cambodia, Lao PDR and the Philippines, where the DRR integration is taking place in the curriculum. The Annex 1 provides suggested DRR modules for subjects taught in school in Cambodia. Annex 2 and 3 provides detailed contents of DRR Curriculum developed in India and Lao PDR.

Box 10

DRR in school curricula of Cambodia, Lao PDR and Philippines

Lao PDR

Developed 9 DRR chapters to integrate into 2 subjects of 2nd year of lower secondary level viz. Natural Science and Social Science. The contents of DRR module include definition of hazards, causes and effects and how to reduce the impact of disasters. The main chapters are -

- Hazards and Disasters
- Landslides
- Earthquakes
- Floods
- Drought
- Fire
- Pollution
- Road accidents
- Civil unrest

Cambodia

Integrated draft DRR module into Earth and Geography subjects of lower secondary level (grade-8) which covers -

- Floods
- Drought
- Tsunami
- Deforestation

Philippines

To integrate DRR module into Science and Social Sciences subjects in higher secondary level.

Step 4 c Training of teachers

Once the draft subject/module is developed, a selected number of teachers from various parts of the country should be trained in teaching in the new subject/module. Teacher's manuals should be developed for training the teachers. The teachers could be from the schools selected for testing of the curriculum, and also from other schools and the national teachers training institutes. The latter could be trained as Master Trainers.

Box 11

Training of draft module

- Teachers from selected grade,
- School principals and School directors,
- Officials from Provincial and District Department of Education,
- Officials from teacher's training center,
- District pedagogical advisors.

Apart from the teachers it is also essential to train relevant officials from various levels of Ministry of Education and other concerned agencies. Box 11 provides a suggested list of agencies to be involved in training.

The key point to be remembered while planning a training of the teachers would be to be aware of the school calendar. Often teachers are most busy during the time of the regular school semester and particularly during the time of examinations. Perhaps a time of school vacations should be targeted for organizing such training.

Step 4 d Pilot test of the DRR subject/module

The draft subject/module developed should be tested in a cross section of schools from where the teachers have been trained. The testing should be synchronized with the school annual calendar.

The testing of the draft subject/module should be done over a few months, giving enough time for the students to grasp the content. It would also allow the teachers to analyze the gaps in the subject/module, related to contents, structure, effectiveness in reaching out the message to the children, as well as practical problems in terms of teaching hours, text books etc. The teachers can also develop activities for the students in the available time.

At the end of the testing, there should be an evaluation of the draft curriculum and the teaching by the teachers. The students can be involved in quiz, story writing, essay writing, painting competition, etc. to evaluate how well they have understood the lessons on DRR. Based on the suggestions from the evaluation, the contents of the subject/ module should be revised.

Step 5 Work with the curriculum developer and review committee

It is suggested that the technical working group works closely with the curriculum developer and the National curriculum review committee, so that in the next curriculum revision cycle the new DRR subject/module could be taken up for integration.

Step 6 Integration of the DRR subject/ module into the national curriculum

To achieve the final leg of integration, the first task would be to attain the approval of the advisory group on the revised subject/module. Also it is to be ensured that budgetary provision has been made for adopting the new subject/module, and all related approvals (from relevant departments of Ministry of Education, Local Government, NDMOs) are obtained.

Apart from the steps mentioned, there are a few crucial steps which need to be carried out parallel to the other activities. Box 12 provides some of these steps.

Box 12

The list of activities Also to do

Consultations: During the integration of the DRR curriculum, several consultative meetings should be organized at different stages to seek input from stakeholders like relevant UN Agencies, NGOs, technical institutes etc.

Documentation: It is extremely important that the entire process of developing and integrating the DRR curriculum/module be documented and shared with other RCC member countries, which would guide them on taking up similar action.

Sharing/exchange information: By conducting advocacy workshops in project countries to orient the officials from Ministry of Education and other related Ministries, to advocate for mainstreaming of DRR into policies, planning and implementation of Education sector. These workshops could be attended by representatives of other countries where the task of integrating DRR into the curriculum has been accomplished, is in process or is being contemplated. Wide participation in the workshops would facilitate sharing of information and synergizing efforts.

5 Long term activities on the PIP essential for institutionalization

The following activities are essential for institutionalizing the integration of DRR into the national curriculum

Collaborating and developing partnerships

Collaboration and partnerships should be developed with specialized local or international NGOs/CBOs, UN Agencies, and bilateral agencies who have been working in the Education sector of the country. Box 13 provides a partial list of agencies involved in education sector of Cambodia, Lao PDR and the Philippines and box 14 provide details of specific agencies working in Lao PDR.

Box 13

Partial List of agencies involved in Education sector in Cambodia, Lao PDR and Philippines

Cambodia	Lao PDR	Philippines
UNICEF	UNESCO	UNICEF
UNDP	UNDP	UNDP
UNFPA	UNICEF	UNESCO
UNESCO	UNFPA	
	WHO	
	World Bank	
JICA	JICA	JICA
USAID		USAID
	Save the Children Australia	Save the Children America
	Lao National commission for UNESCO	
	Lao Red Cross	
	Lao environment & Social Project (Lens)	

Box 14

Partial List of agencies involved in Education sector in Lao PDR

Agencies	Involvement in specific themes related to the School Curriculum
UNICEF, WHO, UNFPA (support by JICA)	HIV/AIDS, Hygienic and Life Skills curriculum (primary education)
UNFPA & UNICEF	Population education, Geography, Civil unrest, TOT, Natural Science Biology curriculum (secondary education)
JICA	Science, Math, Physics, Biology curriculum (upper higher education, G-10)
World Bank	Technical Assistant (primary & secondary education)
Lao Red Cross and Ministry of Social welfare	Community based curriculum
Lao environment & Social Project (Lens) under PM office	Environment related curriculum (primary & secondary education)

Capacity Building

This is the key to sustainability of this initiative of integrating DRR into school curriculum. It is a well documented fact that teachers in most countries are usually over burdened with the existing curriculum and the limited resources in terms of salary as well as for teaching aids. Hence it is extremely important to build additional capacity for the teachers so that the DRR curriculum/module does not become a burden. Hence regular trainings for teachers need to be carried out along with orientation workshops and advocacy campaigns for the education community as a whole. This is particularly useful for teachers at the provincial, district and village level schools.

It is also essential to review the existing teaching aids (teaching manual, instructors guide, text books, work books, student activities, etc.) and make necessary changes so that the aids facilitate the teachers in delivering the curriculum.

Monitoring and Evaluation

This is perhaps one of the most difficult tasks but an absolute MUST to achieve the ultimate goal of integration. One simple process could be to develop a checklist of the key activities mentioned above and to monitor the progress against each activity. However such a list would only help to monitor the outputs against each activity and not really the outcomes.

One of the challenges to be faced by the agencies would be to develop performance indicators for monitoring and evaluation of the impact of the initiative. In this regard, it is essential to remember participatory monitoring techniques involving the communities can be of great value.

It is suggested to form a monitoring and evaluation team with members from the technical working group and advisory group, who would be responsible for developing the M&E Framework. The increase in the level of knowledge about DRR amongst the children could be monitored through questionnaires at various intervals. In addition a school safety week could be conducted at the end of the teaching activities for the final evaluation of transfer of knowledge.

Expanding and Linking to the National Education Development Plan

If the DM Curriculum/ module is initially developed for a particular grade/s it would be required to expand it to other grades of the school by developing similar contents relevant to the level of each grade.

This whole process of DM curriculum adoption should be ultimately linked to the curriculum revision process (hence undergoing review and revision in each cycle) and to the Education Sector Development Plan of the RCC member country.

Annex

A number of RCC member countries have integrated DRR into the school curriculum. Only a few examples are cited in these guidelines. RCC member countries are encouraged to make available their experiences and case studies, for inclusion in these guidelines.

- 1.Suggested DRR modules for integrating in subjects taught in school in Cambodia
- 2.Cover of CBSE Curriculum in India
- 3.Cover of Disaster Risk Reduction Module of Secondary Curriculum in Lao PDR

Annex 1 Suggested DRR modules for integrating in subjects taught in school in Cambodia

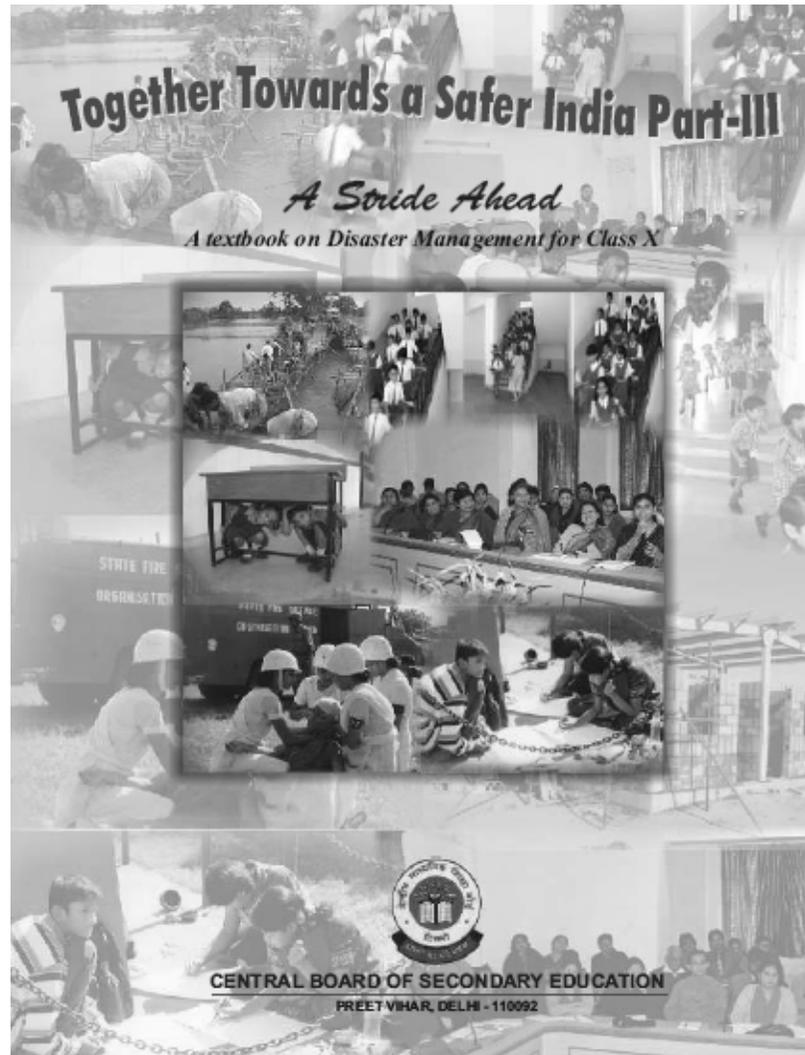
Sl. No.	Objectives	Activity	Actors	Target Group	Subjects	Outputs	Description
01	Integrate DM into school curriculum to raise awareness among students on disaster preparedness, mitigation and response	Develop students curriculum to integrate DM	Members of the Advisory Group with involvement of the Working Group	School Students of Grade 1-3	Khmer	Chapters with Stories on past disasters and mythological beliefs connected to them	Topics can focus on changing the traditional beliefs of disasters are acts of gods.
					Physical and Health Education	Educational Board Games (e.g. Riskland developed by UNICEF-ISDR) First Aid Education	To teach how to prepare and react during a disaster
					Local Life skill Programs	Swimming Lesson for both boys and girls	To be able to save themselves during floods.

Sl. No.	Objectives	Activity	Actors	Target Group	Subjects	Outputs	Description
02	Integrate DM into school curriculum to raise awareness among students on disaster preparedness, mitigation and response	Develop students curriculum to integrate DM	Members of the Advisory Group with involvement of the Working Group	School Students Grade 4-6	Khmer	Stories and poetries on past disasters and mythological beliefs connected to them	Topics can focus on changing the traditional beliefs of disasters are acts of gods.
					Social Studies	Art Education (Painting competitions, murals, etc) Student workbook Disaster Preparedness Coloring Book	Have students portray their experiences of the disaster in various art media. This may be done individually or as a group effort Would be a fun and interactive way to get students involved and to increase their knowledge on disaster and preparedness One page of text and coloring page for children on: natural disasters, emergencies, different kinds of disasters, disaster supplies kit, and family disaster plan.
					Physical and Health Education	Swimming Lesson Conducting regular emergency drills for students along with teachers and parents Health related issues and Basic First Aid	Knowledge on what kind of diseases can occur after a disaster and what precautionary measures should be taken

Sl. No.	Objectives	Activity	Actors	Target Group	Subjects	Outputs	Description
03	Integrate DM into school curriculum to raise awareness among students on disaster preparedness, mitigation and response	Develop students curriculum to integrate DM	Members of the Advisory Group with involvement of the Working Group	School Students Grade 7-9	Mathematics	Exercises on problems related to the impact of the disaster or the recovery effort.	For example, build questions around gallons of water lost, , amount of pressure on levees or dams, etc.
					Science	Topics on scientific aspects of the disaster	
					Social studies	Modules in Geography on Different kind of disasters, causes, difference between hazards and disasters	For example, the course of Mekong River, Deforestation on the banks etc.
					Physical and Health Education	Conducting regular emergency drills for students along with teachers and parents	
					Local Life Skill Program	Mapping Exercises of the community	To have a better understanding of the social and physical condition of the community
Sl. No.	Objectives	Activity	Actors	Target Group	Subjects	Outputs	Description
04	Integrate DM into school curriculum	Develop students curriculum to integrate DM	Members of the Advisory Group with involvement of the Working Group	School Students Grade 10-12	Science	Modules in subjects like Earth and Environmental studies on Environmental Impacts of Disasters	
					Social studies	Modules in subjects like Civics on the role of government	To grow awareness among students to look at disaster along

					<p>and other agencies in disaster management in the National and Provincial context</p> <p>Modules in subjects like Geography on topography of the country, hazard maps etc</p> <p>Modules in subjects like Economics on direct and indirect impacts of disaster on the economy of the country</p>	<p>with development and thus introducing the concept of Mainstreaming Disaster Risk Reduction</p>
				Health Education and Sports	<p>Exercise on collecting data on past disasters in local area</p> <p>Drawing a map of the village indicating major infrastructure such as schools, hospitals and temples (potential safe areas)</p>	<p>Developing the concept of volunteerism among the students and importance of their contribution for preparing against any disaster and also during a disaster</p>

Annex 2



Annex 3



List of themes of Guidelines being developed and Priority Implementation Partnerships under the RCC Program on Mainstreaming Disaster Risk Reduction into Development Policy, Planning and Implementation in Asia (RCC MDRD)

1. Mainstreaming DRR in the National Development Planning Processes

- 1.1 Mainstreaming DRR into the National Development Plan
- 1.2 Mainstreaming DRR into the National Poverty Reduction Strategy
- 1.3 Developing and Implementing the National Disaster Risk Reduction Plan with inputs from all Relevant Ministries and Agencies
- 1.4 Mainstreaming DRR into In-Country Assessments and the Multi-year Program Framework of International Development Agencies
- 1.5 Institutionalizing of Community-Based Disaster Risk Management in Government Policy
- 1.6 Mainstreaming DRR into the National Environmental Impact Assessments for New Development Projects
- 1.7 Mainstreaming DRR into the National Adaptation Plan of Action (NAPA) under the UN Framework on Convention for Climate Change

2. Agriculture

- 2.1 To promote effective programs of contingency crop planning to deal with year to year climate variations.
- 2.2 To promote effective programs of crop diversification including the use of hazard resistant crops, to deal with shifts in climate patterns
- 2.3 To ensure sustainable livelihoods in areas of recurrent climate risks (i.e. arid and semi-arid zones, flood and cyclone prone areas) by promoting supplementary income generation from off-farm (e.g. animal husbandry) and non-farm activities (e.g. handicrafts).
- 2.4 To promote effective insurance and credit schemes to compensate for crop damage and losses to livelihoods due to natural hazards

3. Urban Planning and Infrastructure

- 3.1 To incorporate disaster risk assessments as part of the planning process before construction new roads and bridges

- 3.2 To promote use hazard risk information in land-use planning and zoning programs

4. Housing

- 4.1 To promote hazard-resilient designs (e.g. flood proofing, or seismic safety) in rural housing in hazard-prone areas
- 4.2 To promote utilization of national building codes that have special provisions for enhanced design standards for buildings in areas affected by natural disasters
- 4.3 To promote compliance and enforcement of local building laws that requires standards prescribed in building codes in urban hazard-prone areas

5. Health

- 5.1 Project to assess hospitals that are located in hazard-prone areas, analyse the internal and external vulnerability of health facilities during emergencies and increase the standard resilience to these hazards– building / functioning
- 5.2 Develop and implement Hospital Preparedness Plan for all health facilities

6. Education

- 6.1 Incorporate DRM modules into school curriculum
- 6.2 To construct all new schools located in hazard prone areas to higher standards of hazard resilience
- 6.3 To add features in schools in hazard prone areas for use as emergency shelters by incorporating additional facilities for water, sanitation and cooking

7. Financial Services

- 7.1 Incorporating micro-financing scheme to have flexible repayment schedules that can be activated in the event of recipients being affected by natural disasters
- 7.2 Encourage financial services sectors and local capital markets to develop schemes for financing disaster risk-reduction measures.

RCC Member Countries

Director
General Department of Disaster
Preparedness
Office of the Vice President
Government of Afghanistan

Secretary
Ministry of Food and Disaster
Management (MFDM) And
Director General
Disaster Management Bureau
People's Republic of Bangladesh

Secretary
Ministry of Home Affairs and Cultural
Affairs
Kingdom of Bhutan

Director
National Disaster Management Center
**Ministry of Home Affairs State of
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1st Vice President And Secretary General
National Committee for Disaster
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Kingdom Of Cambodia

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General Department of Disaster and
Social Relief
Ministry of Civil Affairs
People's Republic of China

Chief
Department of Emergency Situations and
Civil Safety Service
Ministry of Internal Affairs
Republic of Georgia

Special Secretary
In charge of Disaster Management
Ministry of Home Affairs
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National Coordinating Board for Disaster
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National Disaster Management Office
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Lao PDR

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Directorate
National Security Division
Prime Ministers Department
Government of Malaysia

Chief Coordinator
National Disaster Management
Center
Maldives

Head
National Disaster Management
Agency
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Department
Ministry of Social Welfare
Myanmar

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Prime Minister's Inspection Commission/
National Disaster Management Authority And
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Emergency Relief Cell Cabinet Division,
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Republic of Pakistan

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National Disaster Management Office
Department of Provincial and Local
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Democratic Socialist
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National Disaster Management Office
Timor Leste

Director General
Department of Disaster Prevention and
Mitigation
Ministry of Interior
Thailand

Director
Department of Dike Management
Flood and Storm Control
Ministry of Agriculture and Rural
Development
Socialist Republic of Vietnam



RCC Secretariat

Asian Disaster Preparedness Center (ADPC)

The Asian Disaster Preparedness Center (ADPC) established in Thailand since 1986, is a regional center working to support countries and communities to enhance their disaster reduction capacities through training, technical services, program implementation and information.

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