© UNHCR/A. Fazzina, An Afghan family transports their recovered belongings back to their temporary shelter via donkey car, Pir Pai.

Strengthening capacity for improving the management of water-related disasters in Southeast Asia region

Geographical scope/benefitting country(ies):	Asia and the Pacific region
Duration (in months):	24
Name and Unit of project Officer	Shahbaz Khan Deputy Director and Senior Programme Specialist. UNESCO, Jakarta
Partner(s) institutions:	Ministries, disaster management institutions in involved countries, universities, research institutes and NGOs Network of UNESCO Natural Sciences in Asia and the Pacific
Total estimated budget inclusive of Programme Support costs	US$ 1.2 million

Rationale and background

Known as the most vulnerable region to water-related disasters in the world, Southeast Asia is hit every year by a large number of water hazards creating critical barriers to sustainable

development and poverty reduction. In addition to various types of severe water-related events such as flood, drought, windstorm, landslide, storm-surge, tsunami, water-born disease and epidemics are also taking lives, destroying livelihood and reversing development achievements where most vulnerable people already live in poverty. According to a study prepared for the First Asia-Pacific Water Summit[1], the figures of water-related disasters in Asia-Pacific region revealed that over 600,000 people were killed and nearly 4.5 billion people were affected during the period from 1980 to 2006. This fact accounted for over 80 per cent of the causalities recorded worldwide, in addition to over US$ 8 billion worth of economic damages during the same period. This percentage could rise to as large as 95 per cent or even higher if all health impacts were to be properly documented. The world community has increasingly turned its attention to the issues related to disaster risk management during the last decade. The importance of these issues at the international, regional, national and local levels has been recognized during the last decade in a number of basic multilateral framework agreements and documents. In particular, in the Millennium Declaration, the Heads of States expressed their concern about increasing number of water-related disasters and declared their resolution to enforce cooperation in the areas of disaster risk management and response. The Hyogo Framework for Action 2005-2015 on Building the Resilience of Nations and Communities to Disasters was adopted at the World Conference for Disaster Reduction in Kobe, Hyogo, Japan. The program follows the same timeframe as the International Decade of Action "Water for Life", and one of its objectives is to reduce the number of victims, as well as social, economic and environmental impacts for communities and countries caused by disasters. In order to mobilize and consolidate the efforts of governments, UN institutions, regional organizations, private sector and civil society to build a sustainable society through formation of a culture on disaster preparedness and response, the UN Economic and Social Council (ECOSOS) and UN General Assembly adopted the International Disaster Reduction Strategy in 2000. Taking into account the importance of this issue, water-related disaster management is included as one of the priority topic into the sessions of the Asia-Pacific Water Forum, the regional water partnership network.

Why UNESCO?

Through its broad mandate and expertise, UNESCO facilitates and promotes the use of science and technology to contribute to disaster risk reduction (DRR), by reinforcing scientific cooperation for improving capacity for disaster reduction. UNESCO is helping countries to reduce their vulnerability to natural hazards and build their capacity to cope with disasters. Furthermore, UNESCO provides to governments practical and scientific advice on disaster risk reduction and a forum to work together to find solutions in this area. UNESCO has many programmes in place that deal in one way or another with the study of natural hazards (earthquakes, volcanic eruptions, landslides, floods, droughts, tsunamis, etc.) and the mitigation of their effects. These programmes help understand the mechanisms of natural hazards and to analyse why some of these hazards turn into disasters.

The International Hydrological Programme (IHP) of UNESCO in its eighth strategic plan, IHP VIII for 2014-2021 refers to "Water-related disasters and hydrological change" as one of its priorities. In the context of this priority, the greatest challenge for the IHP community is to identify appropriate and timely adaptation measures in a continuously changing environment. To this end, the main scientific gaps are: i) incomplete understanding of hydrological processes and links with atmosphere/biosphere/human society; ii) appropriate techniques for data integration and/or assimilation, iii) scaling and heterogeneity issues; iv) capabilities to predict hydrological processes and their interactions and feedbacks with socio-ecological systems; v) uncertainty estimation, communication, and incorporation into adaptive resource

[1] Theme B on Water-related Disaster Management Concept Note
http://www.apwf.org/archive/documents/Theme_B_concept.pdf

management decision-making. Furthermore, the UNESCO Office Jakarta has further developed several programs and projects to assist Member States of the region in reducing the social, economic and human impacts of natural disasters.

Overall Goal/Objective

The main objective of this project is to enhance the disaster management capabilities of governments of the Southeast Asia region, for better management of water-related disasters and also to formulate policy to strengthen the regional cooperation on natural disaster issues within the countries involved in the implementation of the project. Capacity building for informed decision-making will be central, therefore enhancing the resilience of affected communities and the knowledge base of regional and national authorities to make effective decisions before and during the disaster through a better comprehension of model forecasts and actions.

To this aim UNESCO-Jakarta will mobilize its full resources to provide to practitioners, decision makers and policy adopters the up-to-date techniques and information to cope with water-related disaster at local, national and regional level.

Given that women and youth are frequently more affected by natural disaster events by virtue of their reduced physical mobility and by taking into consideration the important role of women within the communities in the region, these two groups will be associated with the entire implementation process of the project.

Main Expected results

An interdisciplinary approach will be used to set recommendations and plan actions in order to enhance the understanding and knowledge on water-related disaster management within the involved countries. Cross-cutting activities between national and regional institutions will be developed. The project will also focus on developing a network for data sharing and expert exchange.

Thus, the following are the main expected results:

- The strengths and weaknesses of water-related disaster management systems are analysed and improved at national and regional levels.
- Scientific and institutional frameworks for extreme event predictions reviewed and strengthened.
- Establishment of an environment conducive to the implementation of water-related disaster management strategies.
- Disaster resilient designs that focus on regionally applicable solutions in early recovery, increased resilience against typhoons, tsunamis and floods, develop and promote innovation, and integrate local efforts in the region.

Activities relating to the achievement of expected results

The project objectives will be achieved through a set of key activities in each involved country, to be implemented following sequential and progressive intervention logic, with the output produced under one activity contributing to the success of the next. The results above are interrelated. Implementation encompasses both the provision of experts for individualized consultation as well as the organization of workshops and other training activities. Least

Developed Countries will be a particular priority for all project activities, with specific targets where relevant. Activities will aim throughout the phases to address the specific needs, aspirations, capacities and contributions of women.

Component 1: Review the disaster management systems

- Assessment of the disaster management systems at national and regional levels.
- Advisory support provided to put in place disaster risk reduction systems tailored to specific needs of each country and applying a gender-responsive approach or to update existing systems in the same manner

Component 2: Build an environment conducive to the implementation of water-related disaster management strategies, through:

- Technical capacity building of bodies in charge of water-related disaster management within the countries of the region through institutional arrangementsTechnical training for human resource development in areas such as forecasting, early warning, data analysis and awareness raising strategies.
- Establishment of a regional network on water-related disaster management, bringing together governmental institutions, teaching / research institutions, NGOs, in line with the general rules on disaster risk reduction.

Component 3: Disaster resilient design

- Updated forecast frameworks and standard operation procedures for the affected countries.
- Risk identification and early warning mechanisms improved at national and local levels through targeted capacity building.
- Disaster resilient urban, rural and coastal infrastructure design in the ASEAN region.

Beneficiaries and stakeholders

Beneficiaries include the different actors involved in the decision-making, administration and practical aspects related to the disaster management system. For the policy components the primary beneficiaries are officials from ministries in charge of issues related to water, environment, planning, culture and other ministries willing to integrate disaster management in their work, institutes, NGOs, universities and community representatives.

Water-related disasters management typically requires the intervention of stakeholders from different fields and background. The water science unit of UNESCO Office, Jakarta has a good network of resource persons working in the different sectors of water resource management on the ground across the Asia and the Pacific region. The idea of this project has been expressed and shared with some of them during the IHP strategic meeting on 2-3 December 2013. Not limited to those above, others renowned scientists, researchers and professionals will be associated in some phases of the project.

Implementation strategy

During the implementation of this activity, UNESCO Jakarta will work closely with the Federation of Engineering Institutions of Southeast Asia and the Pacific (FEIAP) within the framework of the United Nations International Strategy for Disaster Reduction (UNISDR), through the Global Facility for Disaster Risk Reduction (GFDRR). UNESCO Jakarta will also engage with ASEAN through its Agreement for Disaster Management Emergency Response (AADMER) to promote regional cooperation, facilitate capacity building and achieve greater collaboration in reducing disaster losses and intensifying joint emergency response to disasters in the ASEAN region. At the country level the UNESCO activity team will work with the Departments of Public Works and Highways, national and local governments in carrying out comparative building code analysis and synthesis and upgrade of the Standard

Operating Procedures (SOPs). The results of this activity will also be shared with the international community through the World Conference on DRR in Sendai, Japan in 2015 where the post 2015 Hyogo Framework of Action (HFA2) will be launched. Through this activity the Asia-Pacific region will contribute to UNESCO's global publication on building codes to be presented during the conference in collaboration with the DRR unit at Headquarters.

Sustainability and exit strategy

The project structure has been adopted to maximize its sustainability and multiplier effect. The proposed interventions will be planned and implemented in close consultation with other UNESCO field offices in the region. The findings and resources to be produced under the project will be designed with a view to encourage their use by key stakeholders even after its finalization. The planned exchanges of good practices, tools and approaches could also encourage the replication or scaling up of activities, and open avenues for new complementary partnerships. The project includes frequent evaluation of the activities provided and the materials produced as well as their potential revision to respond better to the identified needs at national and regional levels.