



# **SAARC Workshop on Mainstreaming Disaster Risk Reduction in Development**

## ***BACKGROUND PAPER***

*Organized by*  
**SAARC Disaster Management Centre, New Delhi**  
*In collaboration with*  
**Disaster Management Centre (DMC), Govt of Sri Lanka**

14-15 November 2008,  
Colombo, Sri Lanka

# SAARC Workshop on Mainstreaming Disaster Risk Reduction in Development

## Background Paper

### 1. Contexts

With 23 per cent of global population but only 1.3 per cent of global income, South Asia remains one of the underdeveloped regions of the world. This is reflected in poor physical, social, economic and human development index of almost all the countries of the region<sup>1</sup>. The region as a whole is home for more than 40 per cent of the world poor, malnourished and illiterates.

1.2 The geo-climatic conditions of the region are such that make the countries of the region highly vulnerable to natural hazards of every description. Unplanned human settlements, unsafe building practices and high density of population, particularly in the growing urban areas, have further compounded the complex matrix of hazards, risks and vulnerabilities of the region. The end results are disasters of every type and magnitude that visit the region at regular intervals, consuming life, property and livelihood of hundreds of thousands of people every year. In the year 2007, for example, out of ten worst natural disasters of the globe, seven were in South Asia<sup>2</sup>. This is not an isolated example of a year but the general trend of years and decades.

1.3 The disasters have been eroding, over minutes, hours or days hard earned gains of development of years and decades. It is estimated that the countries of the region have been loosing between 2 to 20% of their GDP and 12 to 66% of the revenues on account of disasters every year. These do not include losses in some of the informal sectors of the economy which generally go unaccounted or long term damage and loss of environment and ecology which can not be measured immediately. Some of the countries may not be spending as much on social sectors like public health or education as they may loosing due to disasters. On top of it, almost all the countries of the region are forced to divert scarce

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<sup>1</sup> The South Asian countries fare poorly in almost all the selected World Development Indicators published annually by the World Bank. In terms of Human Development Index (HDI) of the UNDP for the year 2008, the global ranking of the eight South Asian countries out of 177 countries of the world are: Afghanistan (166), Bangladesh (140), Bhutan (133), India (128), Maldives (100), Nepal (142), Pakistan (136) and Sri Lanka (99).

<sup>2</sup> CRED CRUNCH, Issue No 12, April 12, 2008 ([www.cred.be](http://www.cred.be))

resources to disaster relief, rehabilitation and reconstruction, which create further set back to development. It is now quite evident that natural and manmade disasters in South Asia are one of the important barriers to the realization of the Millennium Development Goals of the United Nations.

1.4 The link between disaster and development has been appreciated by the countries of South Asia only recently. All the countries of the region have endorsed the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters* which envisages “integrating risk reduction into development policies and plans at all levels of Government including poverty reduction strategies and multi-sectoral policies and plans”. The countries have adopted the *SAARC Comprehensive Framework on Disaster Management* which identifies “mainstreaming disaster risk reduction into the development policies and practices of the government at all levels” as one of the key priority areas for developing resilience to disasters in SAARC region. Each country has developed its disaster management framework which commits mainstreaming disaster risk reduction in development. All these are significant steps forward; yet there are lots which remain to be done to translate these commitments into practices – words into action.

1.5 In this backdrop, the SAARC Disaster Management Centre (SDMC), New Delhi in collaboration with Disaster Management Centre (DMC), Govt. of Sri Lanka, is organizing a SAARC Workshop on Mainstreaming Disaster Risk Reduction in Development in Colombo, Sri Lanka on 14-15 November 2008. The Workshop aims at taking stock of on-going efforts with regards to mainstreaming disaster risk reduction in development in the region, review the progress made by the countries, identify the difficulties faced and develop a regional roadmap that would guide the future programmes and activities that the Centre in this direction.

## **2. Disaster and Development –Key Concepts and Issues**

2.1 Disaster impacts considerably all the sectors of development and thus results in a serious social and economic setback to the development. On the other hand, the process of development, and the kind of development choices made in many countries, sometimes creates disaster risks. The intricate relationship between disaster and development is outlined in the following Table.

### Three dimension of development and disaster linkage

	Economic Development	Social Development
<b>Disaster limits development</b>	Destruction of fixed assets. Loss of production capacity, market access or material inputs. Damage to transport, Communications or energy infrastructure. Erosion of livelihoods, savings and physical capital.	Destruction of health or education infrastructure and personnel. Death, disablement or migration of key social actors leading to an erosion of social capital.
<b>Development causes disaster risk</b>	Unsustainable development practices that create wealth for some at the expense of unsafe working or living conditions for others or degrade the environment.	Development paths generating cultural norms that promote social isolation or political exclusion.
<b>Development reduces disaster risk</b>	Access to adequate drinking water, food, waste management and a secure dwelling increases people's resiliency. Trade and technology can reduce poverty. Investing in financial mechanisms and social security can cushion against vulnerability.	Building community cohesion, recognising excluded individuals or social groups (such as women), and providing opportunities for greater involvement in decision-making, enhanced educational and health capacity increases resiliency.

(Source: Reducing Disaster Risk a Challenge for Development, UNDP<sup>3</sup>)

2.2 Further, mainstreaming is a cross-cutting issue which requires political commitment, public understanding, scientific knowledge and know-how, responsible risk sensitive development planning and practice, a people-centred early warning system and disaster response mechanisms. In addition, safeguarding human rights and integrating gender concerns are central to achieving mainstreaming concepts at the local and national level. Because disaster risks impact multi-sectoral development activities (such as education, health, environment, governance, employment and livelihoods) they influence development gains. So an assessment of the extent to which these social domains consider natural or human-induced factors of risks (existing and prospective) in the conceptualization and implementation of programmes, is crucial. This also means that development programmes need to assess whether a development project could cause/increase risk of any kind of disaster in future and if necessary identify/introduce counter-measures for risk control.

<sup>3</sup> Reducing Disaster Risk a Challenge for Development, UNDP 2004

There is an emerging consensus that the key to achieving sustained reductions in disaster losses lies in factoring risk considerations into both development and post-disaster recovery activities. Managing risks could become a means of reducing future disaster risks through ‘corrective’ development planning which ensures, through measures such as land-use planning, building controls and others, that development activity does not generate new risks.

2.3 On the emerging contours of development and disasters, the 2nd Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) in Nov 2007 at New Delhi had organized special panel discussion covering three aspects – (i) disaster impending development, (ii) developing creating disasters, and (iii) development without disasters. It was recognized that most of the countries of Asia have very high risks of disasters and they are also on a high trajectory of economic growth. Therefore the challenge of the Asian countries in the coming years and decades would be to develop in a manner that would reduce the risks of disasters. It was felt that the challenges are more formidable for high risk and fast developing South Asian region.

2.4 It was also recognized that the economic development which has a spin of effect on housing, education, nutrition, health etc does help vulnerability reduction, however, there is always the danger that unplanned growth of human settlements and unhindered exploitation of natural resources especially in low-income-high-growth South Asian economies would create new risks in the long run. Therefore mainstreaming disaster risk reduction in development would be one of the most challenging tasks of development planning in the coming years. Innovative tools and methodologies have to be developed to ensure that development does not create new disasters and that risks of disasters created by unplanned developments in the past are reduced in the future. These tools have to be tested, further adapted according to the local needs, capacities and resources and applied in a systematic and sustainable manner through a participatory process.

2.5 Yet another challenge would be incorporating disaster risk reduction in climate change adaptation and coping with high density urban growth. Innovative solutions are required to address these challenges. Capacity development of various stakeholders at national, regional and local levels, exchange of information and good practices and regional cooperation would be the key components in any innovative solutions.

### **3. Tools and Techniques**

3.1 Realizing the regional imperatives, national needs and prospects of mainstreaming, the following mechanisms and instruments need to be developed and further strengthened while formulating plan of action for mainstreaming DRR in development.

#### ***a) Identify development induced disasters***

3.2 It is a well known fact that inappropriate development processes are contributing to risk accumulation. There are many examples demonstrating how economic growth and social improvement lead to increase in disaster risk. Rapid urbanisation is an example. The growth of informal settlements and inner city slums, whether fuelled by international migration or internal migration from smaller urban settlements or the countryside, has led to the growth of unstable living environments. These settlements are often located in ravines, on steep slopes, along flood plains or adjacent to noxious or dangerous industrial or transport facilities. One such development has led to increase in risk due to landslides in urban areas of Chittagong city in Bangladesh. This is true in other megacities as well and in rapidly expanding small- and medium-sized urban centres. When population expands faster than the capacity of urban authorities or the private sector to supply housing or basic infrastructure, risk in informal settlements can accumulate quickly. Third, in cities with transient or migrant populations, social and economic networks tend to be loose. Many people, especially minority or groups of low social status, can become socially excluded and politically marginalised, leading to a lack of access to resources and increased vulnerability.

#### ***b) Develop guidelines on mainstreaming***

3.3 All development projects should have mandatory guideline to address how exactly it is going to implement DRR in terms of social and physical vulnerability. Risk can be reduced by making efforts wherein either the vulnerability or exposure is reduced. Risk can also be reduced by reducing the hazard probability, for example while undertaking a road construction in hilly area, the slope stability measures can be built in such a way that the hazard probability can decrease thus reducing the overall risk. Similarly, the poverty alleviation or education programme can also reduce the social vulnerability, thus reducing overall disaster risk.

Similarly limiting development in high risk area, it is possible to reduce exposure, and thus overall risk is reduced.

***c) Develop sector specific guidelines on mainstreaming***

3.4 It is necessary that appropriate strategy is developed to mainstream DRR into following specific sectors with clear cut guidelines and objectives. Some of the suggestive sectoral guidelines could be as under:

**Infrastructure: Public Works, Roads and Construction**

- Promote use of hazard risk information in land-use planning and zoning regulations.
- Conduct disaster risk impact assessments as part of the planning process before the construction of new roads or bridges.

**Housing: Urban and Rural Housing Development**

- Encourage use of hazard-resilient designs (e.g. flood proofing, or seismic safety) in rural housing programmes in hazard-prone areas.
- Promote utilisation of national building codes that have special provisions for enhanced design standards for buildings in areas affected by natural disasters.
- Ensure compliance and enforcement of local building laws requiring prescribed standards under national building codes in urban hazard-prone areas.

**Health**

- To promote programmes to identify hospitals and health facilities that are located in hazard-prone areas, analyse their internal and external vulnerability during emergencies, and increase the hazard resilience of these hospitals through “Safe Hospital” programme.
- To prepare and implement a Hospital Preparedness Plan for all such health facilities.

**Agriculture**

- To promote effective programs of contingency crop planning to deal with year to year climate variations.
- To promote effective programs of crop diversification including the use of hazard resistant crops, to deal with shifts in climate patterns.
- 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).

- To promote effective insurance and credit schemes to compensate for agricultural related damage and losses to livelihoods due to natural hazards.

### **Education**

- To incorporate DRR modules into the school curriculum.
- To construct all new schools located in hazard-prone areas to higher standards of hazard resilience as has been attempted in Kashmir and Bhuj region under “Safe School” programme.
- To add features in schools in hazard prone areas for use as emergency shelters such as facilities for water, sanitation and cooking as envisaged in coastal areas as possible cyclone shelters.

### **Financial Services**

- To incorporate provisions in micro-financing schemes to have flexible repayments schedules that can be activated in the event of recipients being affected by natural disasters.
- To encourage the financial services sectors and local capital markets to develop schemes for financing disaster risk reduction measures.

#### ***d) Carry out cross-sectoral risk analysis***

3.5 Cross-sectoral risk analysis needs to be carried out at national, local as well as regional level. Ongoing schemes across the sectors should be critically revisited and wherever possible the development aspects of these schemes should be integrated for a better result. This should be done in a futuristic mode with immediate medium and long terms planning. For example, if a hydroelectric project is being implemented, attempts must be made to assess the change in the hydrological regime and its impact on soil erosion and landsliding. This would require a multi-disciplinary approach across sectors

#### ***e) Develop area specific guidelines on mainstreaming***

3.6 Area specific guidelines for mainstreaming DRR in development should be formulated with particular reference to coastal and hilly areas that are prone to disasters.

#### ***Coastal Zone Management***

Coastal Zone Management would be critical for environment, natural resources, climate change adaptation and DRR as well. It would then lead to a holistic development of the coastal zones in

the region which caters a significant population of South Asia and majority of whom are poor and vulnerable to any type of disaster. Therefore, in any coastal zone management effort, DRR with respect to multiple hazards must be considered.

### **Hilly Area Development**

As South Asia encompasses large tracts of hilly area, it is important to use all developmental initiatives specific to hilly area to implement DRR strategy which is very critical for environmental protection and sustainable development. It would then lead to a holistic development of the hilly area and its population majority of whom is poor and vulnerable to disaster and is often isolated from the mainland of development.

### **f) Create techno-legal regime for mainstreaming**

3.7 It is necessary that appropriate techno-legal mechanism is developed to implement the regulations made with respect to DRR strategy. There may be a statutory organisation responsible for the undertaking assessment on compliance and implementation on ground. For example, the hydro-projects have a mandatory provision of afforestation and it is imperative that it is implemented on ground and proper assessment is done with respect to its positive impact.

### **g) Conduct Disaster Impact Assessment**

3.8 The assessment of the potential risks to any place (village, city, nation etc.) or elements (infrastructure/land use etc.) is the major part of DIA related to any developmental activity. Therefore, it is necessary to consider all possible impacts of various hazards that may arise due to implementation of a project. This entire exercise could be very complex and may require comprehensive assessment of data related to natural as well as social sectors. Some elements of the DIA are similar to well known practice of EIA and therefore, it must be pursued under similar guidelines.

### **h) Private-Public Partnership:**

3.9 In the present scenario, it is visualized that more and more unorganized and organized private sectors would play major role in developmental activities. It is important to foster collaboration with private sector in a Public-Private partnership to address the implementation of DRR in development initiative. This partnership could

play a key role in communication, infrastructure, market, health and many others areas. Recently, a leading software industry in Hyderabad, India has demonstrated a disaster response system for the citizens of the city which is operational 24/7 and is fully endorsed by government.

***i) Research and development:***

3.10 It is one of the major elements of mainstreaming disaster mitigation/reduction into development. R&D capacity in earthquake, flood, drought, climate change, industrial, nuclear disasters and many other fields must identify areas and strategies how to identify risk at early stage in a holistic manner and minimize it by suitably integrating mitigation measures in to development model. Various professional scientific organizations must reorient their programme to support the safe developmental needs. For example the road development agencies, must take into account the present requirement of mass transport and suggest suitable infrastructure which is viable and environmentally sustainable.

***j) Awareness generation, training and capacity building:***

3.11 It is important to make aware all stake holders about the coupling of disaster and development. It must be understood and communicated that there exist a mechanism by which development can be implemented with DRR provisions. This awareness will lead to public demand for disaster audit and in turn will ensure sustainable development. It is important to note that awareness development must be initiated at all levels starting from school curricula to basic training in safe construction to advance project management. Capacity building through education, training and mid career intervention using on campus as well as off campus model must be implemented for quickly covering large manpower base. Building on capacities that deal with existing disaster risk is an effective way to generate capacity to deal with future risk arising out of new context which is often not visualised.

***k) Recognition of best efforts:***

3.12 Recognition of efforts is one of the best incentives that promotes and attracts many to emulate the good practice in implementing DRR in development. It also acts as stimulant for the recipients to carry on the good work and innovate ways the efforts will have far reaching results across the society. Numerous such examples can be cited from drought management and poverty alleviation programmes that are being

implemented in western part of India and have received international accolades.

### Steps to successful mainstreaming



This figure presents the series of steps necessary for successful mainstreaming of disaster risk reduction in hazard prone countries. Not all the steps are necessarily sequential in order as presented, but rather overlap with each other in practice.

*Source: Benson, Charlotte, and John Twigg. Tools for Mainstreaming Disaster Risk Reduction: Guidance Notes for Development Organisations. ProVention Consortium, 2007.*

## 4. Mainstreaming DRR in Development in South Asia

4.1 Towards mainstreaming DRR in development, South Asian countries have just made a beginning. Pursing the HFA in the respective countries has led to some “foundation” level initiatives which would facilitate more specific national and local level activities on mainstreaming DRR. These include<sup>4</sup>:

<sup>4</sup> *Report on Implementation of The Hyogo Framework for Action (HFA): Asia, ISDR/Gp/2007/Inf.5*

- Development of legislative framework and institutional capacity to prevent, mitigate, prepare and manage hazards and disasters;
- Undertaking hazard, risk and vulnerability assessments;
- Developing education, training and information exchange programmes;
- Raising awareness of the community;
- Development of partnerships with the stakeholders at each level;
- The utilization of cooperative and information sharing mechanisms and institutions across the region.

4.2 While there are efforts in South Asian countries to implement DRR in development through National Adaptation Plans of Action (NAPAs), their integration to disaster risk reduction need specific priority. In order to address adaptation concerns as part of their national development plans, the explicit focus on disaster risk is seen only in few cases. For example, the Safe Island programme of Maldives is an integrated effort on addressing vulnerability through strategic planning for climate change adaptation. Similarly, Bhutan has initiated plan of action in this direction through NAPA. It is expected that all member countries develop respective NAPA with an aim to mainstream DRR in development.

4.3 Specific entry point activities for mainstreaming DRR in development have been taken up in the multi-hazard prone regions.

#### **Entry Points for Mainstreaming Disaster Risk Reduction in Development**

**Education:** The building of appropriate school structures, which not only adhere to safety measures but may also be useful as disaster shelters and the development of curricula and institutionalization of safety drills, that provide information on DRR, particularly targeting women and children.

**Health:** Ensuring suitability of health infrastructure, compliance with building codes, availability of and accessibility to goods and services especially in times of emergency, and increased capacity to prepare for disaster events and the outbreak of infectious diseases.

**Environment:** Integrating disaster risk concerns into existing environmental assessment tools and planning mechanisms (environmental impact assessments, strategic environmental assessments), promoting greater compliance to existing environmental and risk management regulations, promoting integrated approaches to spatial planning, strengthening capacities to protect ecosystem services that reduce disaster risk (wetlands, coastal forests, watersheds, coral reefs etc), identifying potential sources of hazardous materials that can trigger acute environmental emergencies, and strategically assessing the environmental impacts of proposed post-disaster recovery plans.

**Governance:** Efficiency and accountability of governance structures at central and local levels should be strengthened, encouraging more inclusive and participatory decision-making processes. Local and national governments design and apply regulatory frameworks that ensure a safer environment, reduce structural vulnerabilities and guide social behavior and economic decisions towards risk reduction and disaster prevention.

***Employment & Livelihoods (including informal sector):*** considering the possible impacts of disasters on livelihoods and jobs, particularly those affecting the informal sector and youth. Promote innovative mechanisms to reduce underlying risk such as microfinance and risk transfer schemes, targeting especially women. Promote greater compliance to existing workplace safety regulations and environmental standards and raise awareness of DRR measures in relevant sectors (e.g. engineers/construction sector, chemical industry etc.).

***Agriculture:*** Increasing agricultural productivity through investments in soil health, water management, extension services, and research increases food availability for subsistence farmers. However, special focus is needed to mitigate the impact of hydro-meteorological fluctuations through multiple cropping, water conservation and biological control measures, with contingency cropping strategies linked to weather monitoring and early warning systems.

***Gender:*** Improved women's participation in decision-making processes and productive activities should specifically include awareness of disaster risks, preparedness and preventive measures that reinforce traditional coping measures undertaken by women and increase disaster resilience of communities. Research on the degree to which women suffer the negative impact of disasters could be undertaken, to better understand and address their specific vulnerabilities and needs.

***Information and Communication Technologies:*** Steps to strengthen science advisory mechanisms, invest in higher education and research, promote private sector development, and improve access to communications technologies can also be linked to better hydro-meteorological monitoring, seismic risks monitoring, and possibility of feeding into better early warning systems to save both lives and livelihoods.

Source: UNDP Disaster Risk Reduction Module, March 2007

Significantly all the countries of South Asia have put in place an administrative structure and supporting mechanism to enhance the mainstreaming DRR in development. Some of the major highlights are listed below:

## **Afghanistan**

4.4 Disaster Management Framework of Afghanistan states to strengthen the capacity of government and civil society to manage disasters at both the national and sub-national levels, with immediate attention being given to the highest priority needs of (a) effective disaster preparedness and response; and (b) the implementation of community-based disaster reduction projects for the most vulnerable communities.

4.5 The National Disaster Management Programme (NDMP), as envisaged in 2003, advocates a comprehensive risk management approach. Members of the National Emergency Commission represent key sectors and have been active in dealing with a range of emergency responses, but the risk reduction thinking and capacity across government is still quite limited. Afghanistan National Disaster Management Authority (ANDMA) has the lead role and is the apex agency for coordinating disaster management activities. The primary function of ANDMA is coordination of disaster management activities at national level. UNDP Afghanistan initiated Comprehensive Disaster Risk

Reduction Programme (CDRRP) to implement mainstreaming through disaster mitigation, poverty alleviation, livelihood generation and educational programmes.

### **Bangladesh**

4.6 Recognising the multidimensional nature of poverty and its role in increasing vulnerability, emphasis is laid on comprehensive disaster management towards poverty reduction and growth. The promotion of food security is considered as an important factor in ensuring the resilience of communities to hazards that can weaken agriculture based livelihoods. The Corporate Plan (2005-2009) of Ministry of Food and Disaster Management endorses these aspects and identified “Mainstreaming of disaster risk management programming through coordination, cooperation and advocacy (partnership development)” as an important goal.

4.7 As a part of CDMP, mainstreaming disaster management and risk reduction into national policies, institutions and development processes has led to introduction of Disaster Impact and Risk Assessment (DIRA) in development project proposals like the Environmental Impact Assessment (EIA) which has been incorporated in all development project analysis. It has initiated a process of revision of Development Project Performa to include DRR in development planning and appraisal processes both for Government and NGO projects. The Bangladesh model of MDRRD emphasizes on mainstreaming risk reduction through a planning process involving national to community level with roles identified for both government and NGOs. In the whole process, emphasis is given to ensure social protection of women, children, elderly, people with disability and other vulnerable groups against vulnerability and risk.

### **Bhutan**

4.8 Bhutan, a tiny Himalayan land locked state with population of over 600,000 (approx.) is threatened by GLOF, flash flood, landslides, forest fires and earthquakes disasters. Acknowledging the emerging disaster threats, Government of Bhutan had asked Ministry of Home and Cultural Affairs (MoHCA) to come up with a comprehensive National Framework for disaster risk management in the country. With assistance from UNDP Office in Bhutan and regional experts, MoCHA have drafted a National Framework for disaster risk management. In which the MDRRD has been envisaged as a theme of mitigation and integration of DRR in development sectors with respect to following:

- Mechanism such as mandatory risk assessments to incorporate disaster risk concerns in all development projects.
- Building codes for earthquake resistant construction and enforcement mechanism.
- Hazard specific (landslides, flood, GLOF) mitigation measures.
- Local level disaster mitigation plans.
- Public awareness and education programmes.
- Incorporation of disaster risk education materials in schools and college curricula.
- Specific attention to road and telecom sector for mainstreaming DRR.

## **India**

4.9 The Government of India has adopted mitigation and prevention as essential components of their development strategy. For the first time ever, the Tenth Five Year Plan (2002-2007) document had a detailed chapter on Disaster Management, which provides guidelines for mainstreaming disaster risk reduction into developmental planning. Towards this, a number of significant steps have been taken up in the recent past such as passing of Disaster Management Act 2005, setting up of National, State and District Disaster Management Authorities, National Institute of Disaster Management etc.

4.10 As per the Act, the NDMA has been entrusted with responsibility to “lay down guidelines to be followed by the different Ministries or Departments of the Government of India for the purpose of integrating the measures for prevention of disaster or the mitigation of its effects in their development plans and projects.” It also emphasises to “monitor the implementation of the guidelines laid down by the National Authority for integrating of measures for prevention of disasters and mitigation by the Ministries or Departments in their development plans and projects”. DMA 2005 also states that a National plan would have “measures to be taken for the integration of mitigation measures in the development plans”.

4.11 The Act has provided for constitution of dedicated funds at national, provincial and local levels for disaster risk mitigation. The National Disaster Management Authority has issued comprehensive guidelines for holistic management of specific types of disasters. Every Ministry is expected to develop its disaster management plan which would include measures for prevention, mitigation and preparedness.

## **Maldives**

4.12 Maldives has developed the Safe Islands Programme, focusing on the development of the larger islands with better economic opportunities, high environmental resilience, and incentives for voluntary migration to these islands. To mitigate future risk from disasters, land use plans of the safer islands have been developed incorporating features of high resilience: with a wider environmental protection zone, elevated areas for vertical evacuation in case of floods, establishment of alternative modes of communication and energy and detailed disaster management plans. Currently five islands have been identified for the programme and development plans prepared in consultation with people. Challenges for the programme include geographical population dispersion, difficulties of access to islands, logistical difficulties, and a high unit cost of delivery of construction material, inadequate human resource to manage projects and above all unpredictable weather and rough seas. But the Maldives are working to reduce the underlying risk and vulnerability factors that at the moment make them among the most “at risk” countries in the world<sup>5</sup>.

## **Nepal**

4.13 A comprehensive national policy on disaster risk reduction and management has envisaged Mainstreaming disaster in sectoral development in Nepal. It also emphasises on strengthening prevention and preparedness with respect to implementation of building codes and change in human settlement pattern. Recently, good initiatives have been taken in Kathmandu, wherein Government and city planning organizations are engaged in developing the land-use and urban plans for the Kathmandu Valley (KTV). This project, referred to as Vision 2020, offers the opportunity to mainstream disaster risk reduction in future development of the cities in KTV. The Kathmandu Municipal Corporation is restructuring its operations, which offers an opportunity to position and elevate the disaster risk management function within the city organization. Realising this as an opportunity, Earthquakes and Megacities Initiative (EMI), a member of UN-ISDR's Global Platform for Disaster Reduction, has launched the 3rd Program with the objective of mainstreaming disaster risk reduction in megacity development planning and operations through demonstrated sound practices in collaboration with Kathmandu Municipal Corporation, Kathmandu Valley Town Planning Committee and National Society for Earthquake Technology – Nepal.

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<sup>5</sup> Report on Implementation of The Hyogo Framework for Action (HFA): Asia, ISDR/Gp/2007/Inf.5

## **Pakistan**

4.14 Realizing the importance of disaster risk reduction for sustainable social, economic and environmental development, the Government of Pakistan has embarked upon establishing appropriate policy, legal and institutional arrangements, strategies and programs to minimize risks and vulnerabilities. In this regard, National Disaster Management Ordinance has been passed, the implementation of which would be ensured by the National Disaster Management Commission. The National Disaster Risk Management Framework has been developed through wide consultation with stakeholders from local, provincial and national levels. The framework envisages to achieve sustainable social, economic and environmental development in Pakistan through reducing risks and vulnerabilities, particularly those of the poor and marginalized groups, and by effectively responding to and recovering from disaster impact. Nine priority areas identified to establish and strengthen policies, institutions and capacities that include:

- Institutional and legal arrangements for DRM
- Hazard and vulnerability assessment
- Training, education and awareness,
- Disaster risk management planning
- Community and local level programming
- Multi-hazard early warning system
- Mainstreaming disaster risk reduction into development (MDRRD)
- Emergency response system
- Capacity development for post disaster recovery.

4.15 Realising the importance of Ministries in mainstreaming disaster risk reduction, Pakistan NDMA has identified the following Ministries for carrying out activities at the national, provincial and local levels.

- Housing and Works
- Water and Power
- Food, Agriculture and Livestock
- Planning and Development
- Industries and Production

## **Sri Lanka**

4.16 Sri Lanka has developed a *Roadmap for Disaster Risk Management*, which is a ten-year plan of action to help Sri Lanka lower risks and better manage future disasters. It includes plans to develop a

vulnerability atlas for Sri Lanka to enable development planning that is sensitive to multiple hazards and associated risks. Other components include multi-hazard early warning systems, preparedness and response plans, community-based disaster management and public awareness, education and training. Five main areas have been identified to integrate DRR in development plans. These include:

- Organizational and legal interventions
- Demonstration projects
- Physical interventions through projects and programme
- Research and development
- Awareness and training programmes

4.17 Disaster Impact Assessment (DIA) shall be integrated into approval process of all development projects. For this purpose necessary guidelines and procedures shall be developed and persons trained to conduct DIA of development projects. The Sri Lanka Disaster Management Act 2005 ordains every Ministry to prepare a detailed disaster management plan related to disaster counter measures proposed to be taken up each ministry, department, public corporation as the case may be. This would enable all concerned departments to implement measures to mainstream the DRR into development.

## **5. Regional Cooperation for Mainstreaming Disaster Risk in Development in South Asia**

5.1 Mainstreaming disaster risk reduction in development is primarily the responsibility of national, provincial and local governments. There is a strong commitment in every country to do so, but there are huge gaps in implementation. The SAARC Disaster Management Centre can facilitate the process of mainstreaming disaster risk reduction in development in the region by a host of measures, which may include the following:

- Collect basic data on disaster risk and the development of planning tools to track the changing relationship between development policy and disaster risk levels through a series of simulation as well as real world studies;
- Develop simple tools and methodologies for integrating disaster risk reduction in specific sectors of development such as poverty reduction, health, education, infrastructure development, rural and urban development, coastal zone management etc;

- Develop standard process guidelines on Disaster Impact Assessment that can be applied to development projects to ensure that disaster do not create further disasters;
- Development training modules on mainstreaming DRR in development and facilitate the member countries to conduct training programmes;
- Document and disseminate best practices in mainstreaming DRR in general and specific sectors of development planning and practices;
- Review the progress made by the countries in mainstreaming disaster risk reduction in development.

## **6. Regional Workshop**

6.1 With the above background, the overall aims and objectives of the SAARC Regional workshop on Mainstreaming Disaster Risk in Development scheduled at Colombo during Nov 14-15, 2008 are to:

- Highlight the key disaster risks and development challenges South Asian region faces, and discuss the best policy options for addressing their root causes and mutual impacts;
- Raise awareness about the importance of mainstreaming DRR at the regional, national and local levels, and also about the innovate methods, tools, techniques, policies and practices on context specific mainstreaming experiences in high risk and development deficient South Asian region:
- Assess the prospects and constraints of mainstreaming DRR in development practice and develop the framework for cooperation on sharing of information, learning from others experience, capacity building etc; and
- Develop a roadmap as well as a tool kit for mainstreaming risk reduction due to flood, cyclone and earthquake in the region.

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