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## Country Report of Myanmar

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## **Introduction**

1. The Republic of the Union of Myanmar, located between 90°32' N & 28°31' N latitude and 92°10' E & 101°11'E longitude with total area of 676,578 sq. km is the second largest country in South-east Asia. Its north-south length is 2,200 km while east-west breadth is 925 km. It is surrounded by China in north and north east, Lao PDR and Thailand in east and southeast, India, Bangladesh in west while Bay of Bengal & Andaman sea in west and south.

## **Demography**

2. The estimated population of Myanmar (2011) is 54 million which accounts for 0.74% of world population. The population density is 79 per km<sup>2</sup> and 70 percent of the population reside in rural areas. Sex ratio of total population is 0.989 male per female.

## **Climate**

3. Myanmar has tropical climate with three seasons, namely Rainy, Winter and Summer. The rainy season comes with the southwest monsoon, lasting from mid-May to mid-October, followed by the Winter from mid-October to mid-February while Summer is from mid-February to mid-May.

4. The average annual rainfall in the coastal regions of the Rakhine and Tanintharyi is in the range of 4,000 to 5,600 mm, while in Ayeyarwady delta it is approx. 3,300 mm. The extreme north receives rain between 1,800 mm and 2,400 mm while hills of the east between 1,200 mm and 1,400 mm. The central dry zone has rain between 600 and 1,400 mm. The average temperature experienced in the delta ranges from 22°C to 32°C, while in the central region is between 20°C and 34°C. The temperature in hilly region is between 16°C and 29°C.

## **Disasters Profile**

5. Myanmar is exposed to multiple natural hazards which include cyclone, storm surge, floods, fire, forest fire, earthquake, tsunami, drought and landslide. According to 10-year record from 1998-99 to 2008-09, the outbreak of fire is about 71 % and it is the most frequent and highly loss among others. It is found that flood 11 %, storm 10 % and other type of disaster 8 %. The causes of fire are hot weather, use of unsafe electrical materials and flammable construction materials, and negligence of people. In the central dry zone and upper regions of Myanmar, fires breakout the year round and only in winter and summer in other parts of the country. On average, 120 cases of urban fire occurred annually during the 10 years period with average losses of 1,212 million Kyats a year.

6. Myanmar is a heavy rainfall country. The monsoon period, called the rainy season, is from June to September. The heaviest rainfall is in the mid season (July and August). During

this period floods occur almost every year along the Chindwin river at Hkamtee and environs, Ayeyarwady river at Hinthada District and Letpadan, Thanlwin river at Paan District, and Sittaung river at Shwekyin, Madauk area.

7. Myanmar is located to the east of the Bay of Bengal with a long coastline. Tropical cyclones usually form in the Bay of Bengal in pre-monsoon (April-May) and post-monsoon (October-November). Annually, about 10 tropical cyclones and depressions form in the Bay of Bengal and out of them almost five become severe cyclones and cross the coasts of India, Bangladesh and Myanmar. Of these cyclones, 90 percent crossed the Rakhine coast, 7 percent the Ayeyarwady delta coast and the remaining 3 percent crossed the Tanintharyi and Mon coasts.

8. Myanmar lies in a major earthquake zone known as the Alpine Himalayan Belt. This zone accounts for about 15 percent of world earthquakes and Myanmar is a country in danger of earthquake.

9. Landslides occasionally occur in the northern part of Myanmar such as Chin State, Kachin State and Shan State. These localities are sparsely populated or non-populated hilly regions. Therefore the effect of landslides is negligible. The main causes of landslides are heavy rainfall and earthquake. Tsunami disaster is very rare in Myanmar and Sumatra earthquake and Indian Ocean Tsunami 2004 was the first tsunami experience of the modern time.

10. Myanmar is also severely impacted by the effects of global climate change with the Climate Risk Index (CRI) of 8.25 being the second after Bangladesh with CRI of 8.0. Major disasters are listed below:

- Cyclone Mala April 2006
- Cyclone Nargis May 2008
- Cyclone Giri October 2010
- Tarley earthquake March 2011(RS 6.8)
- Pakkoku Flash Flood October 2011
- Thabeikgyin earthquake November 2012 (RS 6.8)

### **National Mechanism in Disaster Management**

11. After 2004 Indian Ocean Tsunami, the National Disaster Preparedness Central Committee, the policy formulating body, was formed with the Chairmanship of the Prime Minister. After the new government took over its responsibility in March 2011, the National Disaster Management Agency which was chaired by the Union Minister for Social Welfare, Relief and Resettlement was formed in April 2011. Then, according to changing political structure and demanding disaster situations, the 23-membered National Disaster Preparedness Central Committee has been reformed in May 2013 with the chairmanship of Vice President.

12. Under the Central Committee, the National Disaster Preparedness Management Working Committee has been formed. The Union Minister for Social Welfare is chairman in the management working committee. The Management Working Committee comprises 9 members. To implement preventive measure, relief and reconstruction tasks sector-wise, ten Sub-committees led by ministers concerned were formed under the Working Committee:

- Sub-committee for Information and Education
- Sub-committee for Emergency Communication
- Sub-committee for Search and Rescue
- Sub-committee for Information of Losses and Emergency Assistance
- Sub-committee for Clearing Ways and Transportation
- Sub-committee for Mitigation and Establishing of Emergency Shelter
- Sub-committee for Health
- Sub-committee for Assessment of Losses
- Sub-committee for Rehabilitation
- Sub-committee for Security

13. The State/Region Working Committees and District, Townships, Wards/Village-Tracts Working Committees for Disaster Prevention are also organized. National plan for nine potential hazards in Myanmar is in place. Disaster prevention and preparedness plans are developed in all states/region (Provincial) level. Township level plans are developed in high risk townships.

### **Legal Framework on Disaster Management**

14. National Disaster Preparedness Central Committee issued Standing Orders on Natural Disaster Management in 2009. It can be applied as the Standard Operation Procedure for disaster response. The Natural Disaster Management Law was enacted on 31 July 2013. The law is developed to be in line with Hyogo Framework for Action (2005-2015) and to comply with the ASEAN Agreement on Disaster Management and Emergency Response (AADMER). The Law includes the provisions for formation of disaster management bodies and their duties and responsibilities for all phases of disaster, establishment of disaster management fund at national and region/state level. The Law also provides the guidance to carry out the measures of disaster risk reduction along with the development plans in the country. Drafting process for the rules and regulations under this law was accomplished and the approval of the parliament is under way.

### **Focal Point for Disaster Management**

15. In Myanmar, focal ministry for disaster management is the Ministry of Social Welfare, Relief and Resettlement. It also serves as the secretariat of NDPCC. Under the Ministry, there are two Departments:

Social Welfare Department (DSW) and Relief and Resettlement Department (RRD). While DSW is taking the responsibilities to fulfill the social needs of Myanmar citizens, RRD is responsible for conducting Disaster Management activities in accordance with the international norms and standards. RRD is a focal point of the ASEAN Committee on Disaster Management (ACDM).

### **Objectives of Relief and Resettlement Department**

16. The objectives of Relief and Resettlement Department are:
- (a) Provide emergency assistance for the victims of natural disasters for ensuring immediate relief
  - (b) Conduct preventive measures to reduce the loss of lives and properties due to disasters

### **Main Tasks**

17. To be able to implement above objectives of the social protection, five tasks are adopted as follows;
- (a) Provides emergency assistance for the disaster victims
  - (b) Reintegration for the drifters who stranded to oversea countries because of various reasons
  - (c) Provision of assistance for the Internally Displaced Persons due to insurgency
  - (d) Provision of assistance to the populations who suffer from famine as a consequence of damage of crops due to abnormal weather or insect infections
  - (e) Coordinates with the Governmental Departments, UN agencies, International Non-Governmental Organizations, Local Non-Governmental Organizations and Social Organizations for the disaster prevention, preparedness and disaster risk reduction measures.

### **Myanmar Action Plan on Disaster Risk Reduction (MAPDRR)**

18. The Myanmar Action Plan on Disaster Risk Reduction (MAPDRR), that provides a framework for multi-stakeholder engagement on disaster risk reduction in the country, was prepared with substantial consultation with various stakeholders. MAPDRR's goal is "to make Myanmar Safer and more Resilient against Natural Hazards, thus Protecting Lives, Livelihood and Development Gains". MAPDRR identifies 65 projects that need to be implemented to meet the Government's commitments to HFA and the ASEAN Agreement on Disaster Management and Emergency Response (AADMER). MAPDRR was launched in 2012, and some projects are under the implementation.

## **Cooperation with the Partners**

19. Relief and Resettlement Department has signed Memorandum of Understandings with United Nations Office for the Coordination of Humanitarian Assistance (UNOCHA) and UNHABITAT for cooperation of disaster response and disaster risk reduction. Up to July 2014, there are also ten International Non-Government Organizations are cooperating with RRD through MOU to carry out disaster risk reduction and rural development which can contribute as one of the poverty reduction programs. Being Chair of Disaster Risk Reduction Working Group (DRRWG), RRD is also working with UNDP, co-chair of DRRWG.

## **The Disaster Management Training Centre (DMTC)**

20. The government approved establishment of the Disaster Management Training Centre (DMTC) in order to build up the capacity of people implementing disaster management activities. The DMTC will build upon the existing pool of experts within the Relief and Resettlement Department and the existing Disaster Management Course, which has supported capacity development of officials from Government Departments and Social Organizations, since 1977. DMTC will be located in Hinthada Township in Ayeyarwaddy Region. The Ministry of Social Welfare, Relief and Resettlement is now undertaking the three-year plan (2013-2015) for establishment of DMTC. Under Phase 1 (2013-2014), construction of the three main buildings is now underway. The Ministry is collaborating with international and local partners to mobilize the technical and financial resources for:

- Human resource and institutional capacity development
- Infrastructure development
- Development of Curriculum and procurement of Teaching Aids
- Networking and partnership with International and Regional Training Institutes and Centers

## **Emergency Operation Centre**

21. With the aim to provide the supports for emergency management, response and logistic through information sharing on network and quick decision making, the Ministry of Social Welfare, Relief and Resettlement plans to set up Emergency Operation Centre (EOC). The functions of EOC will include;

- Monitoring/ Watching weather related information and early warnings were received
- Developing research on disasters occurred in Myanmar
- Developing the response plans for each type of disaster
- Exchanging weather information with local/ international organizations
- Documentation of disaster information, Distribution and Coordination

- Reporting the news acquired from affected area to the higher levels in emergency situation continuously and timely

### **Myanmar Disaster Loss and Damage Database**

22. The Myanmar Disaster Loss and Damage Database has now been initiated by the Relief and Resettlement Department with the objective to develop national capacities for monitoring and analyzing risks and vulnerabilities to support disaster risk reduction, mitigation, preparedness, response and recovery. The National framework for the database has been finalized and the pilot data collection is now under-way. The database could be linked with the Regional and global networks in the near future.

### **Improvement for Early Warning**

23. Department of Meteorology and Hydrology (DMH) generates weather forecast and early warnings for cyclone, storm surge and flood. Color-coded cyclone warning message was started to use in 2009, as an attempt to make early warning message to be user friendly. Once the early warning on disaster is issued by DMH, it is informed to the public through media and TV. In order to improve the quality and accuracy of the weather forecast and early warning, DMH still needs to upgrade the capacity of equipment and tools for weather forecast.

24. The DMH organizes Monsoon Forum as a mechanism for fostering a closer dialogue between forecast producers and users to enhance the uptake of weather and climate forecasts for disaster mitigation. The broader goal of the Forum is to build the national capacity to mitigate disaster risks by linking national hydro-meteorological agencies to sectors that are vulnerable to climate risks, notably agriculture, water resources, health, and disaster management.

25. RRD is also implementing the End-to-End Early Warning system project in collaboration with DMH, General Administrative Department and JICA to enhance the capacity of the Government official and the community. The pilot projects for Ayeyarwaddy and Rakhine have been implementing.

26. UN and NGOs are likewise assisting in the production of IEC materials related to early warning as well as on public awareness. The use mobile phone SMS for early warning is also being explored.

### **Inclusion of DRR concepts and practices in School curricula and education material**

27. The Ministry of Education (MoE) revised the General Science Subject for lower secondary school curriculum in 2006 and included the study on *'Earth and Space'* with lessons on storms. The lower secondary life skills subject also covers flood, emergencies, earthquake, tsunami, landslides and fire. The revised upper secondary school curriculum includes a lesson titled *'Earthquake'* in Grade 10 English and

'*Earth Surface Process*' in Grade 11 Geography. At the primary level, a chapter on *Caution in Emergencies*' is included.

28. A complementary reading material that contains information on 8 disasters is available as a self-study booklet for Grade 5, 6 and 7 students. General Studies Textbook (Level 2) with '*Earthquake*', '*Storms*', '*Tsunami*', and '*Preparedness*' topics and a story book '*Be prepared*' are available for Non-Formal Education. Recently, RRD along with State / Regional Government and MOE has incorporated Do's and Don't on various natural hazards into the student exercise book provided by the Government.

### **Youth Volunteer Network**

29. Government has embarked on DRR Youth Volunteer programme providing DRR related Training of Trainers (TOT) for young representatives from Ayeyarwaddy Region. Those young volunteer will be serving as a leader of community disaster management committee then to become a change agent who can promote the necessary change in behaviors. It plans to scale up the initiatives.

### **Conclusion**

30. Since the new elected government came into power in March 2011, Myanmar is pursuing a four waves reform process; the political, economic and administrative reform and development of private sector, aiming to achieve political stability and economic development. The development partners and the international community welcome these changes and join in hands with the government. Accordingly, there is much potential for international assistance as well as foreign investment flowing into the development sectors. These will inevitably result to increase investments in infrastructure and rapid urbanization that encourages rural to urban migration. Meanwhile, if improvements in the development sectors do not integrate disaster risk reduction, they could exacerbate existing disaster risk and create new forms of disaster risk. Building disaster resilience in Myanmar becomes more important than ever, to safe lives of Myanmar people, to protect investment and to ensure the sustainability of development gains.

31. Under such circumstances, rules and regulations under the Disaster Management Law needs to be enacted and then should be applied effectively. Other existing laws in the country that relates to the issues of emergency management, i.e. visa approval, tax exemption, communication law, deployment procedures and data sharing system need to be amended in order to be compatible with regional agreement AADMER. Early warning systems need to be upgraded in order to issue more accurate and area-specific warnings. Human resource development in the

area of disaster management is also an important factor while advocacy measures for local government on disaster management and capacity building for local government staffs becomes an important one.