Country Report

2003

Myanmar

1. Introduction

Myanmar is one of the countries in South-East Asia , bordering with China , Lao and Thailand in the east, China is the north, Bangladesh and India in the west and Indian Ocean in the South. Its area is 676,552 sq.km and population is around 51million now.

Myanmar is vulnerable to cyclones from Bay of Bengal during pre and post-monsoon seasons from April to May and from October to November. These cyclones are causes for heavy rains, floods and storms, especially in the coastal region of Rakhine State – the disaster that afflicts the region every 3 – 4 years.

There are four main rivers in the country; all are flowing from north to south. In the monsoon when the rainfall is rather heavy in the northern regions, the rivers become brimming full, passing maximum levels and sometimes causing flood disaster in the towns and villages along the river.

The low land areas, the delta regions which are known as rice bowl of Myanmar , are also vulnerable to flood disaster during the monsoon when there is flood tide and high river water flow at the same period. In these areas the lands are protected from high floods by earthen dykes, but there were times these lands became flooded with heavy losses of lives and properties since the flood overpowered the dykes.

According to geological data, " Myanmar is an earth-quake-prone country. It lies in a major earthquake belt of the world called Mediterranean – Himalayan belt that accounts for about 15 percent of the world's earthquakes. There are three regions of earthquake epicenters concentration in Myanmar . The first one lies along the eastern foothills of Rakhine Yoma, Chin Hills and Naga Hills .

The second zone is located along the Sagaing facet, the third zone is situated along the northern edge of Shan plateau south of Mogok. These belts are closely related to the tectonics of Myanmar ." As the major urban areas in Myanmar lie in earthquake prone zones, and earthquake hazard reduction program is needed.

Heavy disasters due to earthquake occurred in Bago in 1930, in Yangon in 1970, and in Pagan in 1975, epicenter being in Myanmar itself. Myanmar is fortunate though since the disaster caused be earthquake and landslide are less-frequent so far, and if at all occurred, they were at sparsely populated areas of hilly regions in northern part of the country.

Still fire is the main cause of disasters in Myanmar , according for 70 % of the total. 75% of the population, majority of them farmers, live is rural areas and still traditional building materials such as bamboos, thatch roofing, which are available easily and cheap, are still being used for construction of houses built normally in close proximity. Water scarcity is those areas is problem in case of fire.

2. National Disaster Organization

Myanmar has its own system and practice for disaster prevention and preparedness base on its own social, economical, cultural and administrative practice. In order to carry out disaster preventive measure effectively, the central committee for natural Disaster Prevention, Relief and Resettlement has been formed by the guideline of State Peace and Development Council's Security and Management Committee. The chairman of the committee is Minister for Social Welfare Relief and Resettlement and members are head of Departments concerned State, Divisional and Township level committees are also organized and disaster prevention activities are being implemented.

3. Disasters in Myanmar

Annually Myanmar has to suffer from impacts of disaster: fire, storm, flood, earthquake etc. 70% of disaster are caused by fire, 13% by storm, 10% by flood and the remaining 7% by other causes of disaster. So it is our great national concern to be self-equipped with knowledge and facilities for precaution, prevention and plans regarding fire.

The central part of Myanmar is a dry zone where annual rainfall in 25-30 inches only, an area where soil erosion is taking place and vegetation is diminishing. The problem could turn to draught if not taken proper action in time. Government is implementing plans of greening these arid zones.

4. Disaster Preventions and Preparedness

Fire Services Department under Ministry of Social Welfare Relief and Resettlement is responsible for:

(a) Fire precaution

(b) Fire prevention

(c) Extinction

(d) Training of fireman

(e) Relief and rescue work

(f) Educating the public for awareness of fire and disasters

Central Fire Service Training School was established in Yangon in 1963 and another school of Pyin-Oo-Lwin in 1999. They are conducting courses on basic fire fighting, fire rescue, fire officer course, refresher course, advancement to senior course etc. Government servants and volunteer being trained in these schools. At present there are 545 fire stations in the country, 217 governments and 328 voluntary. Traditional fire hooks and fire beater flats are kept at every house in the villages.

In the delta regions where flooding of the river is the problem, the dykes and water barriers are maintained and reinforced as necessary by Irrigation Department. In area of Rakhine state which are vulnerable to cyclone and storm surge earthen mounds are constructed.

In case of disaster, readily and Development Association, Schools, Army, Reserved Volunteers, Myanmar National Committee for Women's Affairs and Police Force.

Department of Meteorology and Hydrology disseminates information and warning regarding cyclone, flood and abnormal rainfall and river water levels through television, radio, telegram and newspaper.

5. Educative Measure for Public Awareness

The Relief and Resettlement Department (RRD) has been conducting State and Division Level short-term Disaster Management Courses for the public education and awareness on natural disaster reduction with the co-operation of other department concerned such as Meteorology and Hydrology Department, Health Department, Irrigation Department, Myanmar Red Cross Society, Myanmar Police Force and Fire Services Department. The courses are, in fact, the training for trainers so that they have to organize and conduct sub-trainings in their regions. Lecturing subjects by RRD in these courses are as below:

(a) The aims of Disaster Management Course and definitions

(b) History of Disasters in Myanmar

(c) Disaster Management

(d) Counter Disaster Plan

(e) Function of Relief and Resettlement Department

Participating department has also given Lecture of their respective sectors. Within the International Decade for Natural Disaster Reduction, (23) courses were conducted in the cities of (11) States and Divisions from 1990-1991. 1998-99 fiscal year.

6. International Cooperation in Disaster Reduction

Myanmar is fully aware of the importance of international co-operation in the field of disaster reduction activities, research, training and exchange of experience. Hence, Myanmar always avails itself of the opportunity to send its officials to training courses, seminars, workshops and conferences abroad.

On the other hand, regional seminars and workshop are accepted to observe with the co-operation and sponsorship of international and regional organization ESCAP, WMO, UNDP.

Being a WMO/ESCAP panel member country, Department of Meteorology and Hydrology is participating in WMO (World Meteorological Organization). Participating countries are Bangladesh , India , Maldives , Myanmar , Pakistan , Sri Lanka and Thailand . Department of Health has been formulating a plan of actions for flood preparedness, by the health sector emergency preparedness, response in Bago Division funded by WHO (World Health Organization).

7. Stock piling of Relief Goods

As a preparedness measure, the stocks dumping of relief goods have been established in major towns of states and divisions by Relief and Resettlement Department. There are 17 Stock piling centers in state and divisions and one central warehouse in Yangon , which are storing household goods such as clothing blankets, cooking pot and relief assistant material such as tent, water tank, generators and water pump.

8. Disaster Reduction Plan

Department of relief and resettlement have co-operated with the Department of Health, Department of Meteorology and Hydrology, Fire Services Department, Human Settlement and Household Development Department, Irrigation Department and Myanmar Red Cross society in the field of disaster prevention and reduction measure.

Fire is the most threatening in Myanmar especially in Upper region. This region is situated in central dry zone with little rainfall. In rural areas, most of the houses are constructed with locally available raw material such as bamboo, mangrove and thatch. Most of the villages lack site plan and the roads are narrow. There are inadequate water for fire fighting. All these vulnerabilities and negligence of residents are the driven forces of fire disasters in rural areas.

After the advent of State Peace and Development Council, the authority concern managed as systematic resettlement of homeless who trespassed in restricted areas to new towns. On the other hand, the authority made town plans at the fire stricken areas as post disaster activities. The victims were provided rehabilitation plans, resettlement and development schemes. Reducing vulnerabilities by doing physical plan and construction, disaster mitigation will be achieved for the future. Some of the examples are Meiktila Fire (1991) and Myangyan Fire (1993). As the main causes of fire outbreak are due to unplanned development and use of flammable construction materials, the authorities have undertaken the task of physical planning to prevent potential disaster and have also established low cost building materials development unit to develop non-flammable building materials with indigenous raw materials. Systematic establishing of new towns on accordance with town plan is another activity to reduce Fire disaster.

The second most frequent hazards are cyclonic storm and flood. Having a log coastal line along the western part of the country, Bay of Bay of Bengal is regarded as cyclone vulnerable area. Being a heavy rainfall country suffer flood disaster in mid-monsoon period of August to October. Along-term prevention and preparedness plan for cyclone and storm surge, (8) earthen high-mounds (embankments) which consists of refuge shelters and drinking water ponds were constructed in Pauk-taw, Myebon and Minya Township in Rakhine state, cyclone prone areas. During the cyclone season (April, May, September, October), Local populace can take refuge in these high mounds and shelters in case of emergency to avoid from storm surge, and strong wind. Department of Meteorology and Hydrology, is responsible for improving cyclone and flood warning and forecasting system. Hence, broad disseminating of warning are being made through the mass media such as television, radio, wireless, and newspaper.

9. Conclusion

Almost every year, our country is affected by natural disaster such as fires and floods. Needles to say, our first priority is to increase public awareness in-disaster preparedness. The Ministry of Social Welfare, Relief and Resettlement, in cooperation with other relevant Ministries and department, not only disseminate information and data but also issue forecasts and warnings in natural disasters in a timely manner. At the same time, we are prepared with disaster management activities with the guidance and support of the Government, measures are taken without delay for emergency evacuation and relief, health care, social welfare, rehabilitation and resettlement.

Ministry of SWRR through direct sponsorship of Fire Service Department is doing its best to educate local populace regarding prevention of fire which is the major disaster in Myanmar . As shown in annex Ⅲ and Ⅳ the records of disaster due to fire had been comparatively reduced. Still during 2001, losses due to amounted 4,830 million kyat and 28,945 people became homeless.

It shows that we need to educate people from big cities to small villages regarding fire disaster and fire safety. Fire fighting forces in service and volunteers should be formed to be in alert. The people should be encouraged to use for their houses fire resistant material such as brick and metal sheets rather than wood, bamboo and thatch. Above all any community in cities, or in villages, should be self-contained with abundant water sources and fire fighting equipments. Only then can our way of life be free from threats of fire disaster. Natural causes for human sufferings are in existence and we should be aware of this fact. Disaster could be mitigated and human sufferings could be minimized only if we are prepared for such causes with appropriate plans and preparations. Myanmar is ready to share information and learn through other nations' experience regarding of disaster mitigation.

In order to cope up with problems and relief, Myanmar also welcomes so-operations from other nations for educational programs, strategic plans according to local conditions and other forms of assistance, with the view that local populace would prepared for fire disaster or any other disasters which they may have to face according to their locality.

Statement on relief supplies distributed to disasters that occurred in Myanmar between 1988-89 and 2002-2003 (Jan)

	Year	Disasters						Houses Lost	No of victims		Loss (k) (in mil)	Asst. in Cash(k) (in mil)	Asst. in kind (k) (in mil)	Total (in mil)
		Fire	Flood	Storm	Ins.	Other	Total		Household	Population				
1	1988-89	344	9	40	36	64	493	31535	36679	159086	850.17	7.84	2.50	10.34
2	1989-90	366	18	42	20	87	533	16723	24278	112204	1933.56	6.38	2.36	8.74
3	1990-91	313	42	59	19	33	466	22304	30107	123731	285.76	8.3	3.99	12.29
4	1991-92	260	54	58	8	27	407	81178	99789	233050	952.55	32.17	8.67	40.84
5	1992-93	265	29	81	10	22	407	20042	27508	175383	383.62	31.03	4.07	35.1
6	1993-94	230	39	41	7	16	333	26242	30307	159835	658.67	10.18	4.10	14.08
7	1994-95	259	29	38	5	33	364	38409	48595	250237	291.53	12.91	3.06	15.97
8	1995-96	237	32	24	7	16	316	32052	35522	185441	647.51	20.01	5.53	25.54
9	1996-97	141	22	33	4	17	217	27186	31743	176865	204.97	16.58	2.53	19.11
10	1997-98	176	79	62	4	18	339	100001	106078	603397	587.63	36.17	12.74	48.91
11	1998-99	187	5	7	1	7	207	8599	10560	47924	495.69	7.63	9.42	17.05
12	1999-2000	160	27	32	2	23	244	25419	26972	144478	410.55	12.49	9.05	21.54
13	2000-01	105	10	9	1	25	150	3069	5117	24760	245.53	2.52	4.74	7.26
14	2001-02	141	12	8	-	12	173	8530	12399	56957	4572.43	9.72	20.36	30.08
15	2002-03	83	4	7	-	2	96	2556	2835	14420	229.53	2.08	4.72	6.8

	Total	3267	411	541	124	402	4745	443845	528489	2467768	12749.70	216.01	97.84	313.85

Note

Ins. = insurgency

Others. = land erosion, landslide, earthquake, assistance to the poor, shifting of settlements, establishment of integrated villages.

Records of Earthquakes in Myanmar

Sr.no	Date	Place	Intensity	Extend of Disaster
1.	23-03-1983	Amarapura (Mandalay Division)		Many brick buildings destroyed Death toll-500. Flow of Irrawadi reversed.
2.	05-05-1930	Bago (Bago Division)	7.3	The whole city destroyed and burnt down. Death toll-500. In Yangon death toll was 40. The banner of the umbrella of the Shwedagon pagoda was broken down.
3.	04-12-1930	Phyu (Bago Division)	7.3	Houses and buildings destroyed. Death toll-30.
4.	16-07-1956	Sagaing (Sagaing Division)	7.8	Some buildings destroyed. Death toll-40.
5.	09-09-1970	Yangon	-	Many buildings being cracked and therefore had to be demolished some bells from the umbrella of the Shwedagon pagoda fall.
6.	08-07-1975	Pagan (Nyaung-U)	6.8	Many pagodas destroyed. Death toll-2.
7.	30-09-1978	Dedaye	5.7	Buildings and pagodas destroyed. Death toll-3.

Severe earthquakes occurred, but fortunately in sparsely populated areas with less brick buildings.

Disasters due to Storms

	Date	Place	Extend of Disaster
1.	May 14-17, 1884	Sittway (Rakhine)	Death toll-100 people Damage: Ks. 20,000,000
2.	April 22-1936	Kyauk-Phyu (rakhine)	Death toll-1000 people, 7000animals.
3.	October 6-8, 1984	Sittway	Death toll-few people. Damage: Ks. 10,000,000
4.	October 22-24, 1952	Sittway	Death toll-4 persons. Damage: Ks. 10,000,000 (Sittway, Pathein)
5.	May 15-18, 1967	Kayk-Phyu	Damage: Ks. 10,000,000 (Pathein) Ks. 20,000,000 (Kyauk-Phyu)
6.	October 20-24, 1967	Sittway	Death toll-2 persons, 90% houses destroyed in Sittway Damage: K 10,000,000. 90% houses destroyed in Ya-The-Dawng and Kyauk-Taw (Rahine). In Monywa: Death toll-100 people, 1000 animal Damage: K 5,000,000.
7.	May 7-10, 1968	Sittway	Death toll-1037 people, 17,537 animals Damage: 246,700 houses destroyed, Ks. 10,000,000.
8.	May 5-7, 1975	Pathein (Aye-Yar-Wa-Di)	Death toll-303 people, 10,191 animals Damage: 246,700 houses destroyed, Ks. 776,500,000
9.	May 12-17, 1978	Kyauk-Phyu	Damage: 90% of the town destroyed. Ks. 20,000,000
10.	May 4, 1982	Gwa (Rakhine)	Damage: 90% of the town
11.	May 2, 1994	Maung-Taw (Rakhine)	Damage: About K.50,000,000

Plan for Disasters due to Fire

1. No. of fire station in the country – 545

Government fire stations – 217

Voluntary fire stations – 328

2. No. of group for fire prevention – 4,395

3. No. of Auxiliary fire platoons – 6,475

4. Seven working programs of Fire Services Department:

(a) to enhance the three abilities among the fire service personnel namely fire fighting ability, administrative ability and organization ability.

(b) to maintain and upkeep the fire appliances and equipment in a state of readiness.

(c) to obtain sufficient amount of water supply for fire fighting.

(d) to organize and train volunteers extensively.

(e) to make door to door inspections including dwelling houses, offices, shops and private enterprises to be fire conscious and to carry out first aid fire fighting in case of fire.

(f) to inspect factories and mills (including stores, laboratories, and godowns) regularly and give advice on fire precaution and prevention measures.

(g) to form and train firemen to become the reserve force of the state peace and development.