

**RESEARCH REPORT  
ON  
A COMPARATIVE STUDY OF DISASTER RISK REDUCTION AND POST DISASTER  
LIVELIHOOD RECOVERY PROGRAM IN JAPAN AND BANGLADESH**

*Submitted by*

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## **Disclaimer**

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## **PREFACE**

Bangladesh is considered the most natural disaster prone country in Asia. Its coastal areas are periodically hit by floods, cyclone, storm surges, tornados, river bank erosion. After the Catastrophic Cyclone SIDR in 2007 and AILA in 2009 it had severely damaged human life, property and infrastructures in six coastal districts of Bangladesh. Most of the households in that areas faces the hard times after losing their livelihoods. The livelihoods in the area and even the entire local economy severely affected. Natural, financial, physical, social and human assets are all eroded, markets are disrupted, and these adverse effects can lead to the virtual collapse of the economic and social environment. So, effective pre-disaster livelihood planning and post-disaster livelihood recovery programs are needed to address such risks. As livelihood security is strongly related to the disaster risk reduction (DRR), Government of Bangladesh needs effective pre-disaster recovery planning, capacity building and strong institutional support for implementing different livelihood programs in post natural disaster recovery and reconstruction. The paper presents comparative analysis and some findings of livelihood recovery program of Japan and Bangladesh which includes the pre-disaster and post disaster livelihood recovery planning and programs. Theoretical as well as practical experiences on short, medium and long term post disaster livelihood recovery program in Japan context and the tools and logistics used to overcome post disaster situation will enrich the knowledge and experiences of the researcher. In this regard the inputs that can be generated from the research finding will help the Government of Bangladesh for replicating in its own environment in combating disaster risk reduction.

<b>Table of Contents</b>	<b>Pages</b>
<b>1. Introduction</b>	07
1.1 Specific Aim	08
1.2 Research Methodology	08
1.3 Expected Result	08
<b>2. Bangladesh National Disaster Context</b>	09
2.1 Bangladesh DM History	10
2.1.1 GOB Vision	11
2.1.2 GOB Mission	11
2.1.3 Overall Objectives	11
2.2 GOB Capacity in Disaster Management	11
2.3 National Plan for Disaster Management	12
2.4 Strategic Focus Area of DM in Bangladesh	12
2.5 Line of Defence	13
2.6 Preparedness	14
2.6.1 NDRCC	14
2.6.2 DoRR	14
2.6.3 CPP	14
2.6.4 DMIC/N	14
2.7 National Priorities 2011-2020	14
2.8 Regional Priorities	14
<b>3. Natural Disaster in Japan</b>	17
3.1 Disaster Management System of Japan	18
3.2 Disaster Management Framework of Japan	19
3.3 Main contents of the Disaster Countermeasures Basic Act	20
<b>4. The Concept of Recovery Process</b>	21
4.1 Principles of Recovery	21
4.2 Pre-Disaster Recovery Planning	21
<b>5. Definition of Livelihood</b>	23
5.1 Why Consider Livelihood in Recovery Process	24
5.2 Livelihood Assessment Tools and Standards	24
5.3 Employment and Livelihood	26
<b>6. Bangladesh Recovery Plan and Program</b>	27
6.1 Poverty- Disaster Interface	27
6.2 Natural Disaster Recovery Program	29
6.3 Ministry of Food & Disaster Management	30
6.4 Area of Social Protection	30
6.5 Types of Social Protection Program	31-32
6.6 Impacts of Social safety Nets	33
<b>7. A Case Study of livelihood Recovery Program in Bangladesh</b>	35
7.1 Major Emergency Relief by DMRD	35
7.2 Restoration of Livelihood	35
7.3 Repair of Damage Embankment	35
7.4 International Donor Assistance	36
7.5 Need and Priorities (Short-Term)	37
7.6 Need and Priorities (Long-Term)	38
7.7 Disaster Recovery Act/ Guidelines	38

<b>Table of Contents</b>	<b>Pages</b>
<b>8. Constraints and Challenges</b>	39
<b>9. Disaster Victims livelihood Recovery Support System in Japan</b>	40
9.1 Japanese Disaster Relief Act	41
9.1.1 Types of Relief Activities	41
9.1.2 Scope, Method, Time, Period of Activities	41
9.1.3 Compensation Payment	42
9.1.4 Compensation for Disability	42
9.1.5 Disaster Relief Loan	43
9.1.6 Responsibilities for Emergency Relief under Disaster Relief Act	43
9.1.7 Act of Support for Livelihood Recovery of Disaster victim 1998	43
<b>10 A Case Study of Recovery Program of Japan</b>	44
10.1 Formulation of Kobe City Recovery Plan	45
10.2 Kobe City Recovery Project	46
10.3 Three Basic View points of Economic Recovery	46
10.4 Post Earthquake Livelihood Situation and Process of Recovery	47
10.5 Hanshin- Awaji Reconstruction Plan	48
10.6 Seven Elements of Life Recovery	49
<b>11. Lesson Learned and Challenges</b>	49
<b>12. Comparative Study of DM System &amp; Recovery Program in Japan &amp; Bangladesh</b>	50- 51
<b>13. Conclusion</b>	52
<b>14. Recommendation</b>	53

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## LIST OF ABBREVIATIONS

ADRC	: Asian Disaster Reduction Centre
BRAC	: Bangladesh Rural Advancement Centre
CPP	: Cyclone Preparedness Program
CCA	: Climate Change Adaptation
CFW	: Cash for Work
CDMP	: Comprehensive Disaster Management Program
DM	: Disaster Management
DRR	: Disaster Risk Reduction
DMB	: Disaster Management Bureau
DMRD	: Disaster Management and Relief Division
DORR	: Directorate of Relief & rehabilitation
DMIC	: Disaster Management Information centre
DLA	: Detailed Livelihood Assessment
DRRO	: District Relief & Rehabilitation Officer
ECNEC	: Executive Committee for National Economic Council
EMMA	: Emergency Market Mapping and Analysis Tool-Kit
EU	: European Union
EQ	: Earthquake
FAO	: Food and Agriculture Organization
FFW	: Food For Work
GOB	: Government of Bangladesh
GR	: Gratuitous Relief
HEA	: Household Economy Approach
HLSA	: Household Livelihood Security Assessment
ILO	: International Labour Organization
IRP	: International Recovery Platform
ILIA	: Initial Livelihood Impact Appraisal
JICA	: Japan International Cooperation Agency
LAT	: Livelihood Assessment Tool-Kit
LB	: Livelihood Baseline
LEGS	: Livelihood Emergency Guidelines and Standard
MoFDM	: Ministry of Food and Disaster Management
NDRCC	: National Disaster Response Coordination Centre
NGO	: Non- Government Organization
NHK	: Nippon Hoso Kyokai
NPO	: Non Profit Organization
PIO	: Project Implementation Officer
PDRP	: Pre-Disaster Recovery Planning
REOPA	: Rural Employment Opportunity for Public Assests
SOD	: Standing Order on Disaster
SLF	: Sustainable Livelihood Framework
TR	: Test Relief
UNDP	: United Nation Development Program
VR	: Visiting Researcher
VGF	: Vulnerable Group Feeding
VGD	: Vulnerable Group Development
WFP	: World Food Program

## **1. INTRODUCTION**

Restoration of the livelihoods after a big disaster has been increasingly recognised and addressed by all key actors within disaster recovery process. More importantly, disaster affected populations have greatly identified livelihoods as their greatest recovery priorities. Recent different country experiences showed that people constantly emphasised the need to restore their livelihoods rather than receive relief.

Disasters have a dramatic impact on the lives of people not least on their sources of livelihood and productive assets, they leave livelihoods shattered; houses, schools and other public facilities flattened; bridges and road networks collapsed; the geography of the zone sometimes transformed. The impact of disasters hinders the capacity of affected groups to recover in the short-term and rebuild back their assets, thus often condemning the survivors to a long dependency on relief aid. In this context, helping protecting and rebuilding the livelihoods of those vulnerable to disasters becomes an urgent priority. Support to the recovery of means of living in farming, fisheries, rational use of natural resources, wage employment in primary and secondary sectors and services, small trade, micro- and small enterprises in the formal or informal sector, etc. have to be started as soon as possible in the immediate aftermath of a disaster. Assessing the impact of disasters on the livelihoods of people and the capacity and opportunities for quick recovery and increased resilience to future events is an important part of the response to disasters. Yet current assessment systems are often weak, uncoordinated and are not strongly linked to livelihood recovery interventions.

Post disaster livelihood recovery plan or guidelines are primarily developed by policymakers, planners and implementer of local and national government interested or engaged in facilitating a more responsive sustainable and risk reducing livelihood recovery. In this context two major issues need to be considered are i) Enabling livelihood protection ii) improving livelihood promotion. It is recognized that while comparison the livelihood recovery plan or program of two countries there is no guarantee that the same activity will generate similar results across the context. Cultural norms, socio-economic context, gender relation and other factor will influence the process and outcome of any planned facilities. Therefore, the analysis, suggestion or solution in the findings to be applied, adapt where appropriate.

In order to improve understanding of the impact of disasters on livelihoods, livelihood vulnerability, this research work has been carried out to analyzing and responding to the impact of disasters on the livelihoods of people. It tries to find out the best way of livelihood protection as well as improving livelihood promotion

### **1.1 Specific Aim of the research**

- To compare the Disaster Management System in Bangladesh and Japan
- To gather knowledge & skills from the DM system in Japan especially the techniques of pre-disaster livelihood recovery planning and post-disaster livelihood recovery program
- To identify the sustainable recovery plan that leads to promote integrated livelihood management system of Bangladesh



- To identify the main component of the Japanese livelihood recovery and relief act 1998 and replicating important components of Japans disaster victims livelihood recovery support system in Bangladesh
- Replicating Japanese vast experience on DM in Bangladesh
- Prepare recommendations for improvement of DRR in Bangladesh

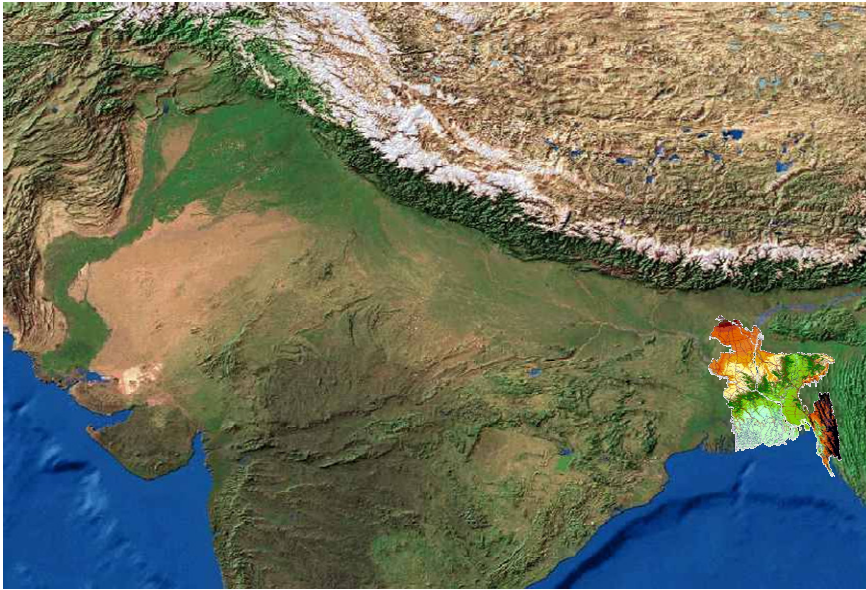
### **1.2 Research Methodology**

- The methodology of the research activities will be based on both primary and secondary data, i.e. identifying and analyzing various governmental / International policy, plans, act, documents, guide books, journals, seminar paper, web materials etc.
- The study will be also enriched by various presentation organized by ADRC/ JICA/IRP, field visits, sharing of experiences with the Central Government and the Local Government officials.
- After the completion of the research work a study report including the recommendation would be prepared.

### **1.3 Expected Result**

Data and information on prevailing disaster management and post disaster livelihood recovery plan, policies, act and practices of Bangladesh and Japan will be collected and compared between two countries. Some best practices of Japan which can be applicable for Bangladesh will be recommended to government of Bangladesh.

## Location of Bangladesh in South Asia



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### 2. National Disaster Context

- Frequently hit by various natural disasters like Cyclones, Storm surges, Floods, Tornadoes, Earthquakes, Droughts and other calamities.
- Monsoon flooding is an annual occurrence shaping lives and livelihoods.
- Almost 200 disaster events have occurred causing more than 500,000 deaths and leaving prolonged damage to livelihoods, infrastructure and the economy.
- Climate change is likely to cause significant impact in the form of severe floods, cyclones, droughts, sea level rise and salinity affecting agriculture, livelihoods, natural systems, water supply, health etc.
- The disaster vulnerable people demonstrates strong coping capacity to face the disaster challenges.
- Bangladesh is the country with complex geo-physical and environmental diversity
- Disaster is a regular phenomena. Living with risks (flood and cyclone) is the reality
- Over the years people of the country has developed their own indigenous coping mechanism
- Strong social belongingness and cohesion among the neighborhoods
- Vibrant NGO sector
- GO-NGO/public-private partnership
- Strong support from the development partners

Disasters and Bangladesh		
Major Hazards	Major Disasters	
◆ Flood	<b>Year</b>	<b>Disaster</b>
◆ Tropical Cyclone	1970	Cyclone
◆ Storm Surge	1988	Flood
◆ Tornado	1988	Cyclone
◆ River Bank Erosion	1991	Cyclone
◆ Drought	1996	Tornado
◆ Earthquake	1997	Cyclone
◆ Arsenic	1998	Flood
◆ Fire	2004	Flood
	2007	Flood
	2007	Cyclone(SIDR)
	2009	Cyclone ('alia)
		Death
		300,000
		2,373
		5,704
		138,868
		545
		550
		918
		747
		1,071
		3,406
		190 (as on 06/06/2009)

## 2.1 Bangladesh DM History

- Soon after 1991 cyclone which caused huge damage and loss, the country has realized that the reactive response to disaster is no longer an option for Bangladesh
- The country has adopted a paradigm shift from reactive response to comprehensive DM approach that includes a number of strategies and mechanism/policy decision
- DMB was created in 1993
- SOD formulated in 1997 and revised in 2010 – SOD recognized every bodies roles and responsibilities in DM and those are spelt out in the document. SOD
- CDMP was formulated in 2000 and launched in 2004
- MoFDM has been created in 2005
- Government also adopted a new DM vision
- A Bangladesh DM model has been created/developed and adopted – the model gave main emphasis on disaster risk reduction.

### 2.1.1 GoB Vision

- To reduce the vulnerability of the poor to the effects of natural, environmental and human induced hazards to a manageable and acceptable humanitarian level.

### 2.1.2 GoB Mission

- To bring a paradigm shift in disaster management from conventional response and relief to a more comprehensive risk reduction culture.

### 2.1.3 Overall Objective

- To strengthen the capacity of the Bangladesh Disaster Management System to reduce unacceptable risk and improve response and recovery management at all

levels.

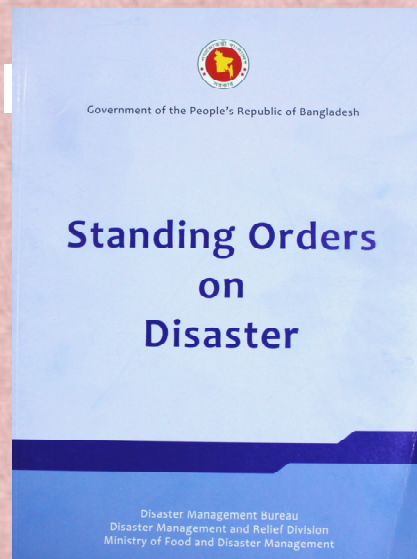
## 2.2 GoB Capacity in DM

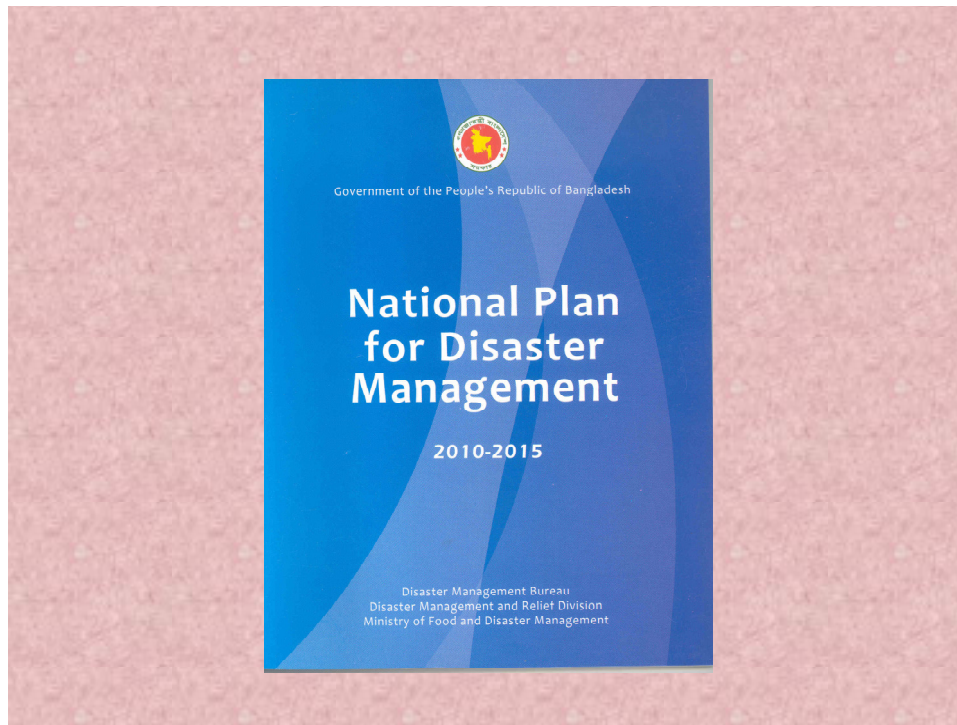
### Specialized **Ministry for Food and Disaster Management**

- Creation of Disaster Management Bureau (DMB): shifting focus from relief to disaster management specially to risk reduction culture.
- ECNEC Decision as part of Mainstreaming of Disaster Risk Reduction.
- Issuance of SOD (Standing Order on Disaster): establishing mechanisms and procedures for effective response at all levels during disaster emergency
- Initiate formulation of 'Comprehensive Disaster Management Framework' involving all disaster stakeholders including donor community
- From 2000 onwards – introduction and mainstreaming of risk reduction

### Standing Orders On Disaster

- The standing order creates the opportunity to establish disaster management committee at every level.
- The standing orders for disaster management provide ample scope for the Government, NGOs and private sectors to think locally and plan need based program involving the community.



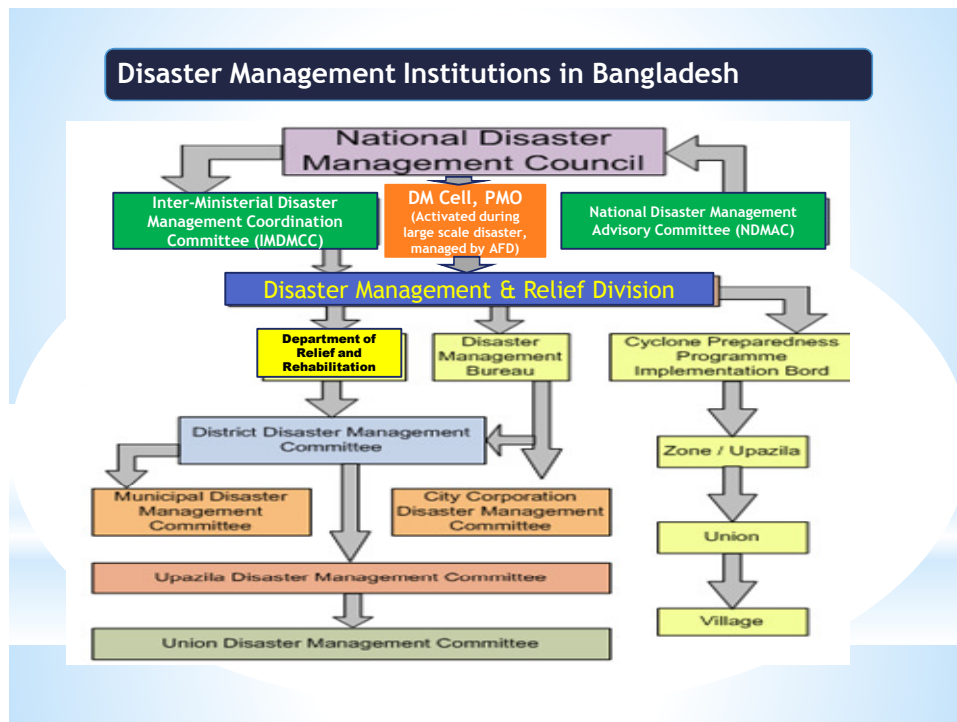


### **2.3 National Plan for Disaster Management**

- To strengthen the capacity of disaster-prone countries to address risk;
- To invest substantively in disaster preparedness;
- To reduce the relief-development gap and thereby reduce vulnerability;
- To enable civil society actors and affected communities to strengthen their resilience to disasters
- To reduce the gap between what we know and what we do, with the critical ingredient being political commitment; and
- To build on the momentum of this World Conference to accelerate implementation of the Framework for Action.

### **2.4 Strategic Focus Area of Disaster Management in Bangladesh**

- Professionalizing the Disaster Management System
- Partnership Development for Disaster management
- Community Empowerment on Disaster Recovery
- Expanding Prevention, Preparedness, Response and Recovery Programmes across a broader range of hazards
- Strengthening Emergency Response Capabilities
- Hazard Mapping of disaster prone areas



## 2.5 Lines of Defense

- **Structural**
  - Cyclone shelters
  - Embankments
  - Polders, evacuation routes, *killahs*
  - Houses and building retrofitting (cyclone resilient)
- **Non structural**
  - Institutional preparedness
  - Warning system
  - Response preparedness
  - Community & civil society mobilization

## 2.6 Preparedness

### 2.6.1 National Disaster Response Coordination centre (NDRCC)

- 24/7 facility at the DMRD, linked to districts, warning and response agencies
- Issues periodical DRR report

### 2.6.2 Directorate of Relief and Rehabilitation (DoRR)

- Stockpile at Dhaka, Chittagong, Khulna and Barisal
- Stockpiles at all coastal district under the jurisdiction of Deputy Commissioner
- Authorized to dispense cash and food for immediate and long term relief up to certain extent

### 2.6.3 Cyclone Preparedness Program (CPP)

- Almost 50,000 community volunteers
- 7 Zone districts, 37 Upazillas, 322 Unions (plus 5 new ly identified Upazillas)

#### **2.6.4 Disaster Management Information Centre /Network (DMIC/N )**

- Maintains update shelter shelters database
- Direct communications with Upazilla PIOs
- Direct contacts with local DM Committees

#### **2.7 National Priorities for 2011-2020**

- Strengthen institutional capacity of all actors as per the revised SOD
- Implementation of the National Plan for Disaster Management (2010-2015)
- Coordinated social safety net to reduce vulnerable population
- Strengthen mechanisms for sectoral and local level implementation of DRR/CCA measures

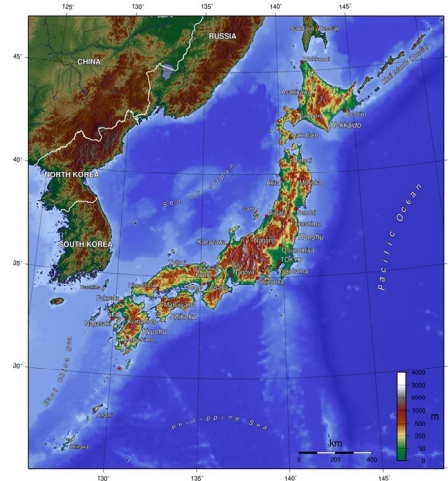
#### **2.8 Regional Priorities for 2011-2020**

- Coordination of regional agendas for global representation and national level leveraging
- Establishing/utilization of common resources/mechanisms for enhancing national risk reduction coordination
- Establishing a regional response plan/mechanism for catastrophic disaster

### 3. Natural Disasters in Japan

## National Disasters in Japan

A Highly Developed country and  
a Country vulnerable to Disaster



11

Japan is located in the Circum-Pacific Mobile Belt where seismic and volcanic activities occur constantly. Although the country covers only 0.25% of the land area on the planet, the number of earthquakes and active volcanoes is quite high. Also, because of geographical, topographical and meteorological conditions, the country is subject to frequent natural hazards. Japan is one of the countries affected unpredicted events of natural disasters such as earthquake, tsunami, floods, landslides and typhoons. Since 1950, many large scales Earthquake, Tsunami, and Typhoons struck the country, which caused massive damage and great loss of economy. That kind of enormous disasters killed huge amount of people. In fact the development of disaster counter measures has been contributing to the development of sustainable disaster management system especially, advanced weather forecasting system and disaster communication system.

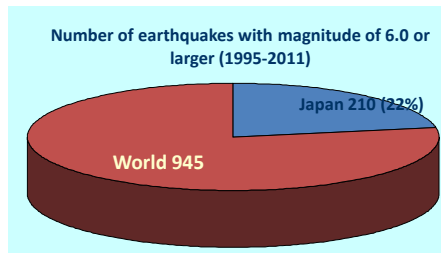
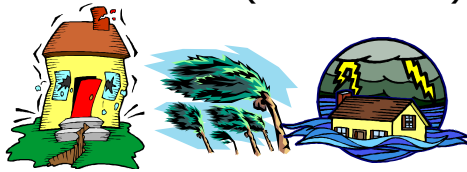
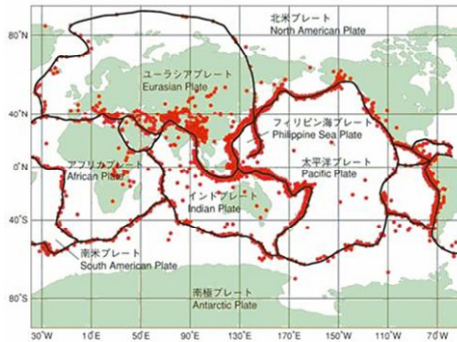
The commonest disaster in Japan is Earthquake. Japan can have up to 5000 earthquakes each year, which is about 10% out of the total occurred of the world. As a result of Earthquakes, Tsunami can also develop to cause catastrophic damages to the coastal belt of the country, which are large waves that crash up against the shore and can wash away people, buildings, and bridges. For example recent EQ and Tsunami (2011, Tohoku Pacific Ocean Earthquake)

Volcanic eruptions are the next dangerous disaster facing in Japan. There are 67 active volcanoes in Japan which means 10% of the world's total active volcanoes over in Japan. A volcanic eruption can discharge ash and lava all over the surrounding areas including populated area too. During the rainy season Typhoons are occurring in Japan. Severe storm may cause many damages along with landslides and floods. Japan hits about 29 Typhoons in the year. Some recorded due to the worst meteorological changes, which cause significant damage and loss of the human life.

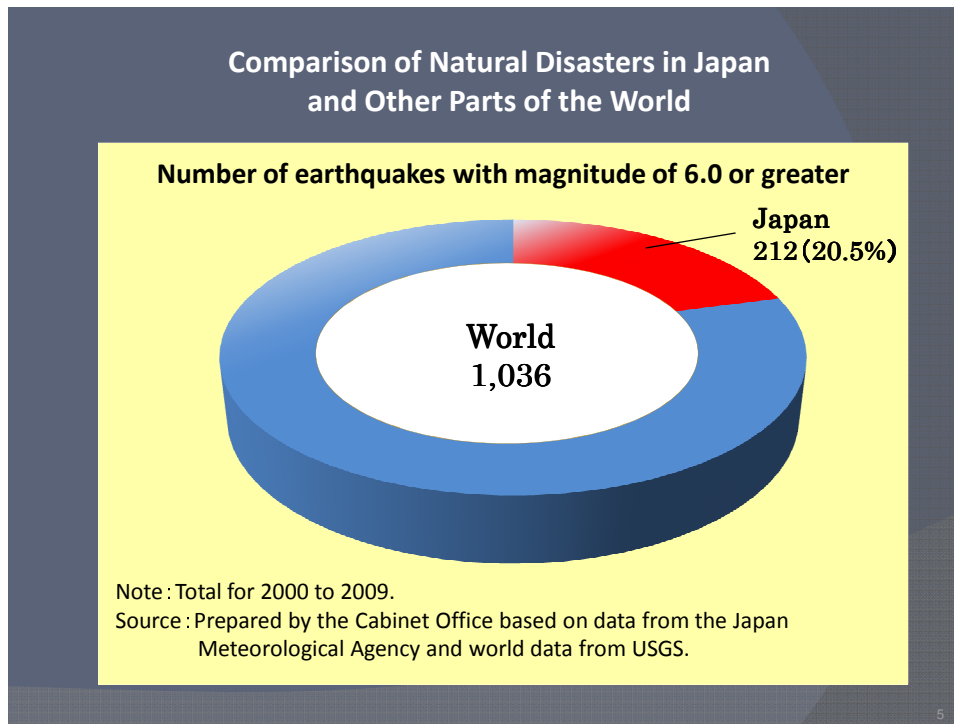


## Natural Disasters in Japan

- Earthquake
- Tsunami
- Volcanic Eruption
- Typhoon
- Flood
- Landslide
- Snow Fall (Avalanche)



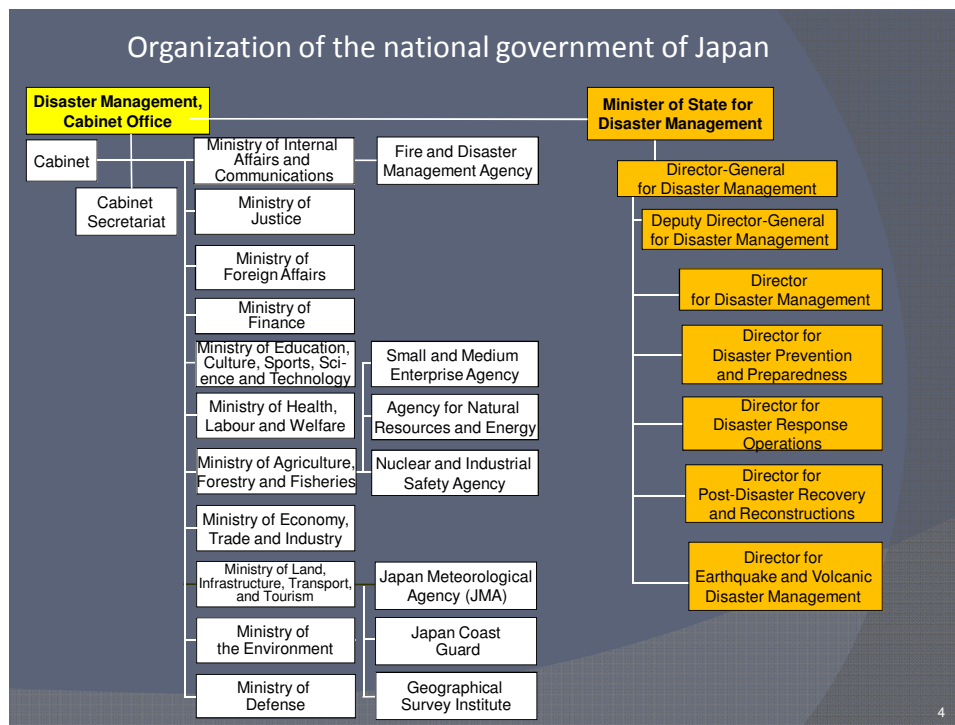
Source: Cabinet Office, Government of Japan



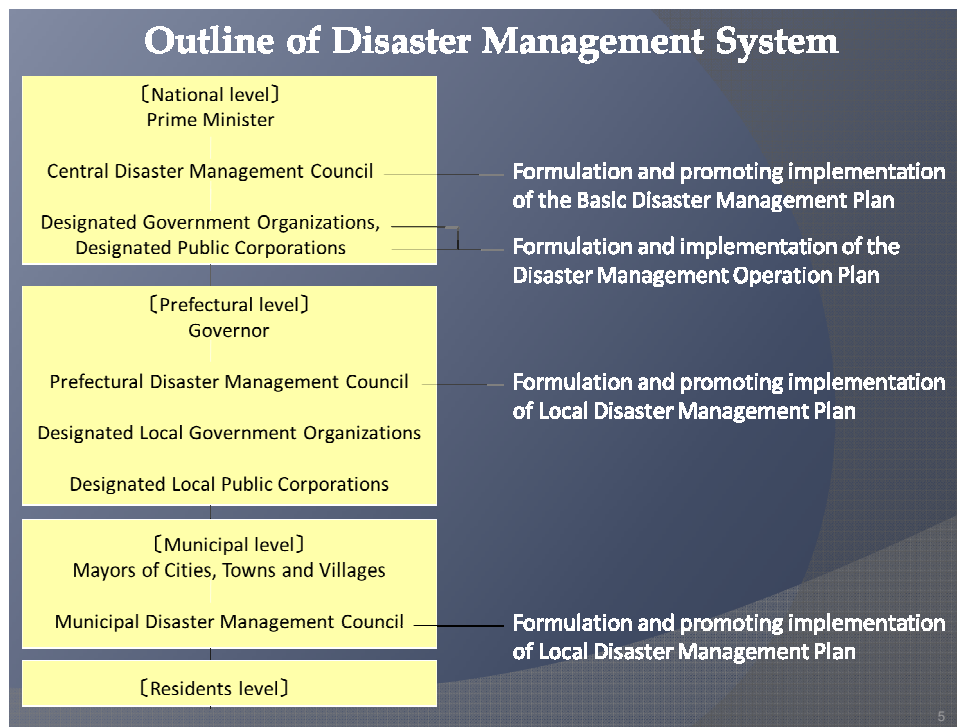
Source: Cabinet Office, Government of Japan

- Flood damage ( 1938,1967 )
- Great Hanshin-Awaji earthquake ( Jan 17, 1995 )
- Hit by many (ten) typhoons ( 2004 )
- Niigata Chuetsu Earthquake ( Oct 23, 2004 )
- Niigata Chuetsu –oki Earthquake ( Jul 16, 2007 )
- Great Sichuan Earthquake ( May, 2008 )
- Iwate –Miyagi Inland Earthquake ( June 14, 2008 )
- Great East Japan Earthquake ( March 11, 2011 )
- Nankai Earthquake ( Occurrence probability within 30 Years : 60 % )

### 3.1 Disaster Management System of Japan



After the Hanshin-Awaji Earthquake, along with a series of reforms of the central government system in 2001, a position entitled "Minister of State for Disaster Management" was newly established to coordinate comprehensive disaster reduction measures throughout the whole government. Furthermore, a Director-General for Disaster Management was placed in the Cabinet Office, whose role included planning basic disaster management policies and responding to large-scale disasters, as well as conducting comprehensive disaster-related coordination within the government.



### 3.2 Disaster Management Framework of Japan

Disaster Management of Japan is categorized into 3 levels including national, regional and municipal level. The significance of each level is detailed as follows:

#### **National Level:**

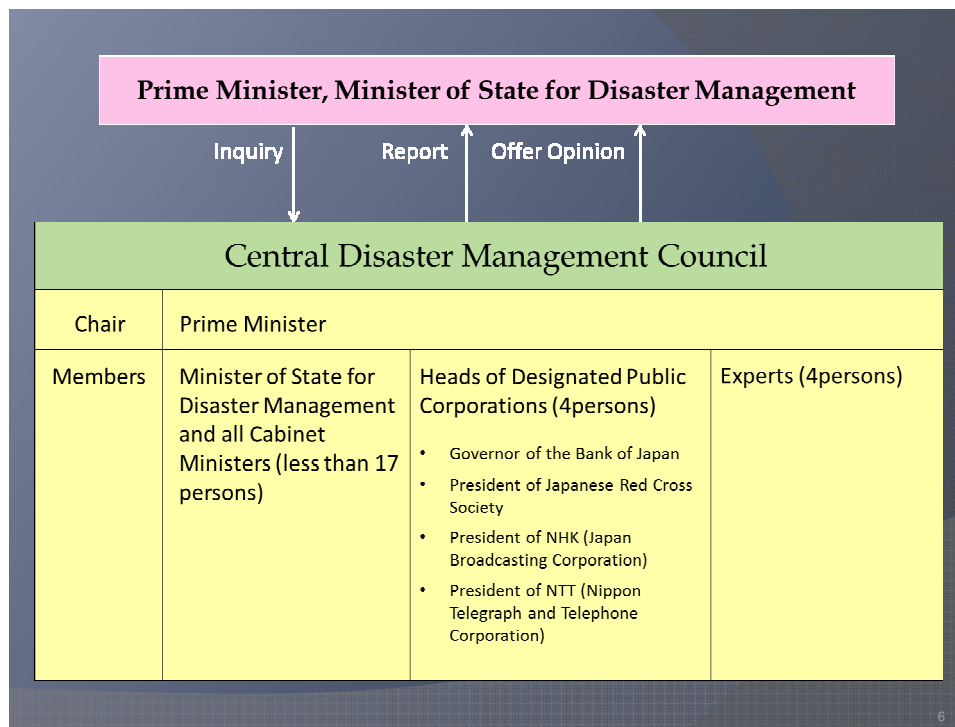
The Prime Minister is the National Commander through the National Disaster Management Council, and the designed government organizations (23 ministries and agencies), and designated public cooperation (63 organizations including independent administrative agencies, Bank of Japan, Japanese Red Cross Society, NHK, electricity and gas companies). In this connection, the national council is responsible for formulation and promoting the implementation of the Basic Disaster Management Plan. Meanwhile, the other two designed agencies of government and public cooperations are responsible for formulation and implementation of the Disaster Management Operation Plan.

#### **Prefectural Level:**

The Governor is the commander ordering via the Prefectural Disaster Management Council, and the designed government organization and public corporations in local. The prefectural council will conjunctionally work with the mentioned designed agencies to formulate and promote the implementation of Local Disaster Management Plan

#### **Municipal Level:**

In this level, the Mayor of City, Town and Village is the commander, as the same of Governor in prefectural level, will take function through Municipal Disaster Management Council to formulate and promote the implementation of Local Disaster Management Plan.



Source: Cabinet Office, Government of Japan

The Central Disaster Management Council is one of the councils that deals with crucial policies of the Cabinet, and was established in the Cabinet Office of Japan.

The Council is chaired by the Prime Minister, and consists of all the Ministers of State including the Minister of State for Disaster Management, heads of major public institutions, and leading experts.

The Council promotes comprehensive disaster countermeasures, including deliberating important issues on disaster reduction according to requests from the Prime Minister or Minister of State for Disaster Management.

### 3.3 Main contents of the Disaster countermeasures Basic Act

- 1 . Definition of responsibilities for disaster management
- 2 . Disaster management organizations
- 3 . Disaster management planning system
- 4 . Disaster prevention and preparedness
- 5 . Disaster emergency response
- 6 . Disaster recovery and rehabilitation
- 7 . Financial measures
- 8 . State of Disaster Emergency

## **4. The Concept of Recovery Process**

The process of recovery consists of the stages of management of people, resources and structure on the way to reaching the objectives of recovery. For this management, there are “three requisites for recovery” that are as following:

1. Heart/spirit of recovery: tenacity for improvement and norm in recovery. How the hope and faith of community can be foster that should be considered.
2. Skills for recovery: Planning skills in recovery process is most significant part of newly undertaken projects for community of the affected areas. Both hardware ((physical) and software (Human resources) element should be under considers ion the recovery process.
3. System for recovery: community participation and collaboration among the members of the community is most important for creative recovery process. Partnership should be developed between community, stakeholders and the local government for smooth recovery process

### **4.1 Principles of Recovery**

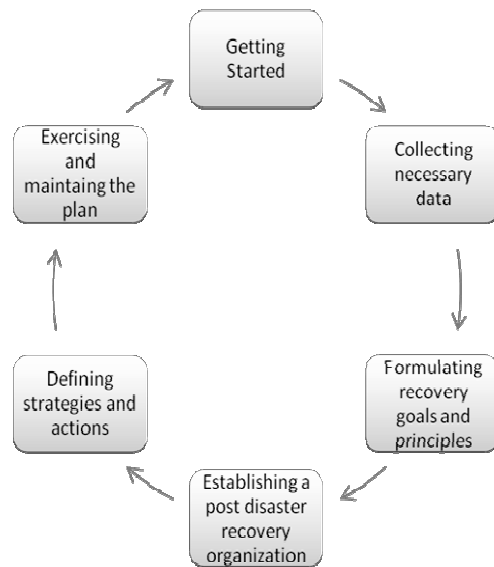
As a principle of recovery we have to involve the local community or stakeholders for successful recover from post disaster situations. Here locality or community refers to

1. To sustain local society or community
2. To carry on local culture of the community
3. To utilize local resources.

### **4.2 Pre-Disaster Recovery Planning**

- 1 What Is Pre-disaster Recovery Planning?
- 2 Why Plan For Recovery Before A Disaster Happens?
- 3 At What Scale Should Pre-planning Take Place?
- 4 How Does PDRP Fit Within The Disaster Management Cycle?
- 5 How Does One Pre-plan For Recovery
- 6 Getting Started
- 7 Collecting Preliminary Information
- 8 Establishing The Post Disaster Recovery Organization
- 9 Formulating Recovery Principles And Goals
- 10 Defining Strategies And Actions
- 11 Assessing And Maintaining The Plan

## Pre-Planning Process



Getting Started

## Benefits of PDRP

PDRP consists of **three components** -

- Developing **goals and strategies** for post disaster recovery based on disaster scenarios
- Creating a recovery **organizational structure** with post disaster **roles and responsibilities**
- Planning pre-disaster actions that will **expedite** post disaster **planning**

PDRP -

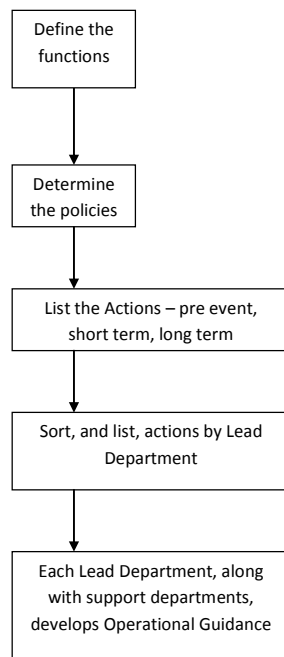
- Expedites recovery
- **Reduces risk** of future disasters - Building back better
- Enables demand-driven and **inclusive recovery**
- Minimizes **development deficits**
- Reduces **recovery costs**



INTRODUCTION

Source: Guidance Note on Recovery, LIVELIHOOD, IRP

### Schema: Steps for Pre-Disaster Recovery Planning



Steps



Source: Guidance Note on Recovery, LIVELIHOOD, IRP

### REVIEW AND UPDATE THE PLAN

Every 3-5 years

## **5. Definition of Livelihood**

The term livelihood comes to light when governments, civil society, and external organizations attempt to assist people whose means of making a living is threatened, damaged, or destroyed.

In order to better understand how people develop and maintain livelihoods, practitioners and academics, developed the Sustainable Livelihoods Framework (SLF). This framework is an analysis tool, useful for understanding the many factors that affect a person's livelihood and how those factors interact with each other. The SLF views livelihoods as systems and provides a way to understand:

1. the assets people draw upon
2. the strategies they develop to make a living
3. the context within which a livelihood is developed
4. and those factors that make a livelihood more or less vulnerable to shocks and stresses

### **Livelihood assets:**

Assets may be tangible, such as food stores and cash savings, as well as trees, land, livestock, tools, and other resources. It also be intangible that can make for food, work, and assistance as well as access to materials, information, education, health services and employment opportunities. Another way of understanding the assets, or capitals, that people draw upon to make a living is to categorize them into the five groups: human, social, natural, physical, financial, and political capitals

### **5.1 Why consider Livelihoods in Recovery Process**

The role of livelihoods-based responses following natural disasters has been debated within the humanitarian community over the last decade. The importance of taking into account the livelihoods of disaster affected populations and, where possible, protecting and developing them, has been increasingly recognized and addressed by all key actors within disaster recovery processes. More importantly, disaster affected populations have overwhelmingly identified livelihoods as their greatest recovery priority. Assessing the impact of disasters on the livelihoods of people and the capacity and opportunities for recovery and increased resilience to future events is an important part of the response to disasters, yet current assessment systems are often weak, uncoordinated and are not strongly linked to livelihood recovery interventions.

In order to improve understanding of the impact of disasters on livelihoods, the Food and Agriculture Organization of the United Nations (FAO) and the International Labour Organization (ILO) have jointly developed the Livelihood Assessment Tool-kit (LAT).

The LAT consists of three main technical elements:

1. Livelihood Baseline Assessment (which is undertaken pre-disaster);
2. Immediate Livelihood Impact Appraisal (undertaken immediately after the disaster); and
3. Detailed Livelihood Assessment (undertaken up to 90 days after the disaster).

### **5.2 Livelihood Assessment Tools and Standards**

#### **i) Livelihood Assessment Tool-kit (LAT)**

FAO and ILO developed the LAT to help recovery actors assess the impacts of disasters on people's livelihoods, and the capacities and opportunities for recovery. The toolkit is



composed of three technical components:

1. Livelihood Baseline (LB) is undertaken pre-disaster to provide background information for a range of response instruments, and lasting 2-6 weeks;
2. Initial Livelihood Impact Appraisal (ILIA) is to be completed within the first 10 days after a disaster to support Flash Appeals; lasting 1-7 days; and
3. Detailed Livelihood Assessment (DLA), usually conducted within 90 days after a disaster to support revised Flash Appeals, Post Disaster Needs Assessments, and donor recovery conferences DLA; lasting 30 days.

Components of an early draft of the LAT were applied and adapted in 2007-2008 following natural disasters in the Philippines, Indonesia, Bangladesh and Bolivia and as input to disaster preparedness efforts in Pakistan. Key Indicators include: % of households losing employment due to disaster; % of households undertaking various coping strategies (including looking for work) after disaster; and Assets lost at household and community levels (physical, human, financial, social and natural) after disaster.

#### **ii) Households Economy Approach (HEA)**

The Household Economy Approach is a livelihoods-based framework for analyzing the way people obtain food, non-food goods and services, and how they might respond to changes in their external environment, shock or hazard. It aims to capture the situation of different wealth groups in different livelihoods zones. This analytical framework has recently been used in the 2004 East Indian Tsunami and 2005 Kashmir earthquake in Pakistan recovery efforts. In a classic HEA assessment, the procedure is to build the baseline first, then conduct the outcome analysis to plan the response as a separate exercise.

#### **iii) Households Livelihood security Assessment (HLSA)**

The HLSA is a holistic and multi-disciplinary analysis which recognizes that poor families commonly suffer more than one problem at a time and often have to make significant sacrifices to meet their basic needs. HLS is an integrated or systems approach to analysis, with recognition that poor people and poor households live and interact within broader socioeconomic and sociopolitical systems that influence resource production and allocation decisions. The HLS assessment process aims to enhance understanding about local livelihood systems – livelihoods, economic, socio-cultural and political systems and the constraints, vulnerabilities, marginalization, and risks of poor families living within this context – and important differences among types of households and among members within the household.

#### **iv) Emergency Market Mapping and Analysis (EMMA) Toolkit**

The emergency market mapping and analysis (EMMA) toolkit is a set of tools and guidance notes, designed to encourage and assist relief and recovery actors to better understand and make use of market-systems. The ultimate purpose of EMMA is to improve the efficiency and effectiveness of the early humanitarian actions taken to ensure people's survival, protect their food-security and their livelihoods. The EMMA toolkit is intended to complement established humanitarian practices in diverse contexts and integrate flexibly into different approaches to relief and recovery planning.

#### **v) Minimum Standards for Economic Recovery after Crisis (ERS)**

The Minimum Standards for Economic Recovery after Crisis address strategies and interventions designed to promote enterprises, employment, and cash flow and asset management among affected enterprises and livelihoods in environments affected by conflict

or disaster. The Standards include two overall sections on Common Standards and Assessments & Analysis, plus four distinct technical areas: financial services, assets interventions, employment creation, and enterprise development.

#### **vi) Livelihood Emergency Guidelines and Standards (LEGS)**

The Livelihood Emergency Guidelines and Standards (LEGS) are a set of international guidelines and standards for the design, implementation and assessment of livelihood interventions to assist people affected by humanitarian crises. (Source: FAO/ILO, 2007, Disaster Livelihood Assessment Toolkit)

### **5.3 Employment and Livelihoods**

Recovery programmers should contribute to improve the living conditions of the affected population.

Specific issues that may need addressing:

- Agriculture and livestock production, through the provision of seeds, tools, micro- credits, and other means
- Small business through the provision of credits or other means
- Recovery of and improvement of productive social infrastructure such as roads, markets, etc. which will support the economic activities
- The reconstruction of the housing sector using local technologies, construction materials, local know-how, to ensure that construction activities will have a direct positive impact upon the local economy.
- Consideration of short-term gender sensitive alternative employment generation to compensate lost livelihoods in the immediate post-disaster period

The guidelines and standards as well as further resources

- Easy to use guidance for ensuring build back better in recovery
- **Guidance Notes on Recovery** offers menu of options based on lessons learned and good practices from global recovery operations in key themes: Shelter, Livelihood, Environment, Gender, Public Infrastructure, Governance, Health, Psycho-social Aspects, and Climate Change Adaptation
- Draws on **best practices and lessons**
- Peer review and inputs from experts for **quality assurance** ready for use
- Capacity building program for Government officials

## **6. Bangladesh Disaster Recovery Plan and Program**

### **Bangladesh's Vulnerability to Natural Disasters, Seasonal Shocks and Climate Change**

#### ***Vulnerability to Natural Disaster***

Eighty percent of Bangladesh consists of floodplains created by more than 300 rivers and channels, including three major rivers : the Ganges, the Brahmaputra and the Meghna. Regular annual flooding has traditionally been beneficial to agriculture; but severe floods occurring less frequently have had adverse impacts on residents and the economy. In the last two decades, major floods occurred in 1988, 1998, 2004 and most recently in 2007-affecting an estimated 11 million (2007) to 68 million (1998) people. The southern part of the country is also particularly vulnerable to cyclones-with a 710 km long coastal belt and an area of about 37,000 sq. km. Major cyclones have occurred in 1970, 1985, 1991 and 2007, affecting an estimated 1.8 million (1985) to 10 million (1991) people. More than 500,000 deaths were reported due to 1970 cyclone and its aftermath, while the 1991 cyclone caused 138,000 deaths.

#### ***Emerging Challenges of Climate Change***

Climate models indicate that, by 2050, Bangladesh will experience increasing temperatures and monsoon precipitation, intensified cyclones, more severe droughts, and river bank erosion. Additionally, a simultaneous rise in the sea level may alter the sediment balance and salinity in coastal areas. Potential effects of climate change of poverty are substantial, affecting natural resources and common property resources such as fisheries, mangroves and forests, which provide livelihood support for the poor. Furthermore, disasters such as catastrophic floods generate shocks to household savings and consumption and exacerbate food insecurity, water stress, and health problems. Flood-prone districts of Bangladesh, for example, have consistently greater poverty ratios, suggesting a geographic poverty trap.

#### ***2007: The Year of Natural Disasters***

An unusually severe monsoon flooded Bangladesh along with neighboring countries in 2007. By end-July, the floods were affecting 39 of the country's 64 districts, including almost half of the total land area of the Dhaka and Sylhet divisions, and a quarter of Rajshahi division. Preliminary and incomplete figures indicate an estimated 11 million people affected, with damages to 1 million homes, 1.1 million hectares of crops, and more than 23,000 kilometers of roads. Just as Bangladesh was beginning to recover from the floods a Category 4 tropical cyclone (Cyclone Sidr) struck its coastal area. Recent literature on vulnerability and risks in Bangladesh has also highlighted the hardship caused by other covariate shocks such as rapidly rising price inflation of essentials. For example, during the period 2007-2008, retail price of rice in Bangladesh increased by around 38.8 per cent in rural areas and 36.8 percent in urban areas (which in its term was caused by supply shocks due to floods, cyclones and total disruption of the import of food grain from external sources due to upward price spiral internationally and export curbs imposed by major exporter of rice to Bangladesh namely India). This price hike has had a substantial welfare impact since rice accounts for a significant proportion of household expenditure, more so for poorer. In the southern coastline on November 15, 2007, with a radius of 74 kilometers and wind speeds reaching 223 kilometers /hour, it killed nearly 4,000 people and affected the lives of about 8.7 million people in 30 out of the 64 districts in the country. While the country's cyclone-preparedness

program, including advance warnings systems, awareness-building, and shelter availability prevented the death toll from reaching the levels seen during earlier cyclones, economic losses were extensive, including destruction or damage to standing rice crops, fisheries (particularly shrimp farms), forestry, livestock housing, rural roads, and embankments.

### 6.1 Poverty Disaster Interface

- Adverse long-term impact on economic and social activities
- The poor are more vulnerable to any kind of disaster
- Depletion of assets
- Income reduction due to loss of employment
- Increase indebtedness
- Increase migration
- Cost to cope with disaster disproportionately higher for the poor

### 6.2 Natural Disaster Recovery Program

**Government's Vision: To reduce the vulnerability of people, especially the poor, to the effects of natural, environmental and human induced hazards to a manageable and acceptable humanitarian level.**

- Bangladesh regularly faces natural disasters such as flood, tidal bore, tornado, cyclone, droughts etc. The shocks of these disasters have a disproportionate impact on the poor. In response to such shocks, households adopt coping strategies such as reducing food intake, sale of productive assets, resorting to high interest loans and contracting family members to hazardous labor that compromises their well-being.
- **Poor are Hardest Hit:** In a disaster situation, those living near the poverty line can easily slip below it. The landless and near landless may be forced to sell their limited assets for survival needs. Those who depend upon wage labour for subsistence are forced to migrate the village and enter into competitive labour market. Loss of harvest and less alternative source of employment further aggravate the already depressed situation.
- The frequently adverse impact of weather-related disasters has given rise to two reactions in Bangladesh.
  - First, there is the inevitable need for emergency **Gratuitous Relief (GR)** operations. This is a Government program run by the Department of Relief and Rehabilitation. It is designed to provide emergency relief to disaster victims. While it is a relatively small program, it is the main instrument through which the Government provides immediate, short-term relief to disaster areas. **Vulnerable Group Feeding (VGF)**, is triggered by disaster and is used purely as an emergency program.
  - Secondly, there is considerable interest in risk mitigation program.

## **Immediate Assistance Needs**

- Search and rescue operation
- Supply of instant food
- Medicare
- Water and sanitation
- Temporary shelter for displaced people
- Restoration of livelihoods

## **6.3 Ministry of Food & Disaster Management**

### **Disaster Management & Relief Division**

#### **Directorate of Relief & Rehabilitation**

- Policy formulation and implementation of programs/ policies. To Monitor and implement all Food Assisted Programmes Food for Work and Test Relief schemes.
- Monitor & implement Relief Operations. Implementation of Rehabilitation schemes.
- Implementation of Vulnerable Group Feeding VGF programme including Vulnerable Group
- Development VGD Programmes. Distribution of gratuitous relief Sanction of carrying cost of food grains of FFW, T.R, VGD, VGF, Programme etc.
- Distribution of House Building grants. Preparation of budget of the Directorate. Administrative control of District Relief and Rehabilitation Officers (DRRO) and Upazila Project Implementation Officers (PIO) and their subordinate staffs.
- Maintenance & control of relief transport in the Directorate as well as in the field. Construction of Small Bridges, Culverts, flood shelters, Cyclone shelters. Implementation of Food Security Enhancement Initiative Programme. Implementation of Disaster Management Programme. Implementation of Risk Reduction Programme

## **6.4 Areas of Social Protection**

- – Social Safety Net
- – Food Security
- – Micro Micro-Credit
- – Rural Employment
- – Disaster Management
- – Basic health service
- Access to public schools

## **6.5 Types of Social Protection Program**

- Cash transfer
- Food Assistance

- Social Empowerment
- Access to basic health care

### **Food Security and Disaster Assistance**

#### ***Vulnerable Group Development (VGD)***

VGD Program was introduced in 1975 to help women affected during the liberation war of Bangladesh in 1971 with food aid from the World Food Programme (WFP). It has continued ever since and has also produced various off-shoot programs such as IGVD. The program aims at developing marketable skills and efficiency of women through training, help formation of capital through motivating savings and providing scope for availing micro credit. Another important goal of the programme is to build social awareness on disaster management and nutrition through training in groups. The beneficiaries get 30 Kilograms of wheat, about 150 hrs of training for a period of 24 months. The targeting criteria for the programme includes i) households with not more than 15 acres of land; ii) monthly Household income less than Tk.300; iii) dependent upon seasonal wage employment; iv) women of reproductive (18-49) age; v) day labour or temporary worker; and vi) lack access to productive assets.

#### ***Vulnerable Group Feeding (VGF)***

The program is aimed at extending assistance in the form of food and basic necessities to selected households in the months following a disaster when agricultural production has been severely disrupted. VGF began in the mid-1990s and has continued since then through supplementary food aid from the WFP. Under the programme, a person gets 10 Kgs of food grain per month for three months following the disaster.

### **Social Safety Nets in Bangladesh**

Government has allocated 15% of the total national budget against social protection program of the country which is 2.5% of the GDP in 2011-12 FY

#### ***Test Relief***

Test Relief (TR), a food transfer program for those of working age to create employment for the poor in the rainy season to construct, develop and maintain rural infrastructure which has considerably lighter labour requirement compared to FFW. Under the program, a beneficiary gets 8 kg of food grain per day for a maximum of 30 days.

#### ***Gratuitous Relief (GR)***

GR, as distinct from TR, provides emergency food and other necessities to the victims of natural calamities. The programme is short-term in nature and has a provision to transfer 10 KG of food grains per person per month. Additionally, under the programme cash can be distributed as well.

### **Employment/Workfare**

#### ***Food For Work (FFW)/Cash for Work (CFW)***

These programs have two major objectives, namely. i) employment generation for the affected people in the slack season, and ii) development and maintenance of rural infrastructures. Several Ministries/Agencies including MOFDM, MOWR, MOSW and LGED run the various initiatives under the programme with resources provided by the GoB, ADB and the WFP. Both FFW and CFW are self-targeting with wage offered being lower than the market to discourage the non-poor to benefits from these programs.

### ***Employment Guarantee Programme (formerly 100 Days Programme)***

This program was introduced by the Caretaker Government in the 2008-09 with an initial allocation of Taka 926 crore and an aim of creating 30.86 lac man-month of work. The main objective of the Programme was to benefit 2,000,000 poor each of whom received Tk. 100 wage for a 100-day cycle.

### ***REOPA***

Rural Employment Opportunities for Public assets (REOPA) is a EU/UNDP supported 5 year project (2007-12) aimed at creating self-employment opportunities of the women, providing training covering various issues of life skill management, and, creation and maintenance of public assets. A key focus of the program is also to help develop the capacity of the women to run Income Generating Activities (IGAs) successfully. By the end of the project cycle, participants are supposed to have a certain amount of capital accumulated from savings from their daily wage to use for undertaking feasible IGAs. Financially supported by the EU, the capacity development interventions of the REOPA are being managed by UNDP, Bangladesh. Allocations for 2010-11 is Taka 77.69 crores to cover 388 UPs in 6 districts.

### ***NGO Programs***

In comparison to government programs, number of NGO programs are more limited in member. However, NGOs also participate in the implementation of many government programs.

### ***Vulnerable Group Development for the Ultra Poor (VGDUP)***

VGDUP is an EU funded program aimed at graduating destitute women and their dependents out of poverty. In 2008-09, assistance was provided to 40,000 destitute women in haor and monga areas.

### ***CFPR-TUP***

BRAC's Challenging the Frontiers of Poverty Reduction: Targeting the Ultra Poor (CFPR-TUP) programme emphasizes economic development through assets transfer but also includes a monthly subsistence allowance designed to cover a portion of a household's basic needs; such as food and other essentials. The subsistence allowance varies according to each participant's case. It is implemented in monga-affected districts and has a time span of 2002-2011. Cumulative coverage since 2002 is 272,000 beneficiaries. Average annual allocation is Taka 260 crores.

### ***SOUHARDO***

Strengthening Household Abilities for Responding to Development Opportunities (SOUHARDO) is a USAID funded and CARE Bangladesh implemented program aimed at nutrition, food security and capacity building for poor households. Phase 1 of the program lasted from 2005-2010 and a new phase up to 2015 has begun. The program reaches average of 74,000 households per annum in food-insecure areas of chars, haors and coastal areas. During 2010-11, Taka 98.46 crores have been allocated for the program. NGOs and local government bodies also participate in the implementation of the program.

### ***Grameen Insurance Programs***

Two newly introduced insurance products of Grameen Bank, the 'Loan insurance Fund' and the 'Grameen Life Insurance' is yet another category of social safety net protection from the NGO sector. Under the 'loan insurance fund' scheme, outstanding loan and interest of

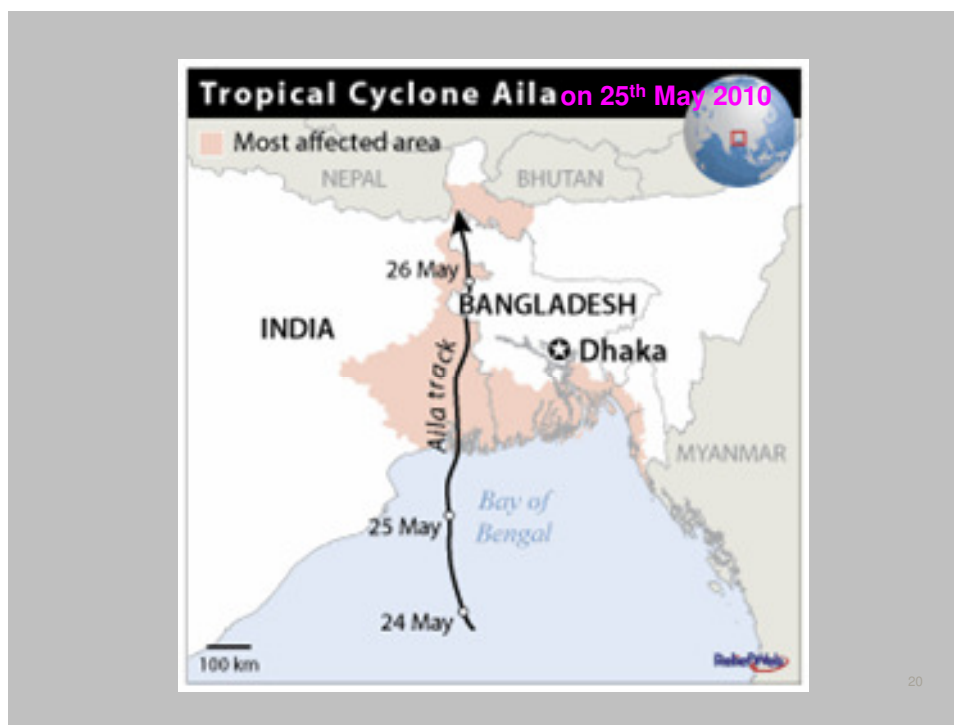
deceased borrowers are paid off from the fund. Borrower needs to deposit Tk. 30 per thousand for herself and Tk. 30 for the husband or Tk. 60/ month. At the death of the borrower or husband, entire outstanding amount of the loan is considered paid off. In addition, if the borrower withdraws her membership from the group she gets back the amount contributed in the fund.

### **6.6 Impacts of Social safety Nets**

- The majority of the households benefiting from the safety net programs based on cash transfer have been able to increase household income and recover their livelihood.
- Programs targeted at women have (a) increased women's participation in household decision-making; (b) improved health conditions of women and their family members; (c) encouraged small investment for income generation in the future; and (d) revived the traditional system of in-family care.
- VGD, TR and EGP also have a development impact.
- Safety net programs in Bangladesh have also become successful to a certain extent in DRR
- Evidence on the impact of conditional transfer programs indicates positive impacts on human capital accumulation



## 7. A Case study of Livelihood Recovery Program in Bangladesh



<b>Death Toll</b>	<b>190</b>
<b>Total Affected Districts</b>	<b>11</b>
<b>Affected Upazila</b>	<b>64</b>
<b>Affected UP/Municipality</b>	<b>529</b>
<b>Affected Family (1m)</b>	<b>948,621</b>
<b>Affected People (4m)</b>	<b>3,928,238</b>
<b>Injured Persons</b>	<b>7,103</b>
<b>Embankment damaged</b>	<b>1,742 Km</b>
<b>Crop loss</b>	<b>77,486 acre Fully, 2,45,968 acre Partly</b>
<b>Educational Institute Damaged</b>	<b>445 Partly, 4588 Partly</b>
<b>Road Damaged</b>	<b>2,233 Km Fully, 6,622 Partly</b>
<b>Bridges 7 culverts</b>	<b>157</b>

### 7.1 Major Emergency Relief by DMRD

Gratuitous Relief: Rice	US\$ 12.15 million (BDT 85.05 core)
27951 MT	
Gratuitous Relief: Cash	US\$ 1.9 million (BDT 12.88 core)
House Building	US\$ 4.28 million (BDT 30.02 core)
Total	US\$ 18.33 million (BDT 127.95 core)

## 7.2 Restoration of Livelihood

Sector	Estimated Loss	Rehabilitation Cost
Agriculture	US\$ 106.44 million	US\$ 50 million
Livestock	US\$ 1.93 Million	US\$ 1 million
Fisheries	US\$ 46.93 Million	US\$ 5.02million
<b>Total</b>	<b>US\$ 155.30 m (BDT 10871 m)</b>	<b>US\$ 56.02 million (BDT 3921.40 million)</b>

## 7.3 Repair of Damage Embankment

- Number of Polder Damaged 47
- Affected Area 188000 hectors
- Assistance to repair damaged 116 crore Taka
- embankments by DMRD (US\$ 16.5 m)

including Rice 25000 MT

41 numbers of polder repaired within 2 months of the Cyclone Aila

## 7.4 International Donor Assistance

Donor	Amount (US\$)	Sectors/Activities
ECHO	11.93 m	Food Assistance, Health & Wash
EU	6.63 m	Shelters
DFID	1.58 m	NFIs, Settlement Support (through IOM)
SDC	1.31 m	Livelihoods & WASH
Govt. of Spain	0.66 m	Food Assistance (through WFP)
WFP	18.5 m	Food Assistance
UNICEF	1.5 m/0.54 m /0.75 m	WASH/Education/Health /Nutrition

FAO	0.5 m	Agriculture
UNDP	0.25 m	Livelihoods
WHO	0.10 m	Emergency Medicine & Wash
Total	44.25 m	

### Present Situation of Affected Areas

Out of 64 affected upazilla 60 upazilla have been recovered from devastation. Remaining 4 upazillas not yet recovered as embankment could not be repaired. For this reason 48000 families are homeless and living on the embankments or other places

### Support to Worst Affected 4 Upazillas from DMRD

District	Upazila	Grant for Housing (in million US Dollars)	Blanket (in thousand units)	Income generating activities for ultra poor (in million US Dollars)	VGF (in metric Ton)	FFW (in metric Ton)	Water transportation cost (in million US Dollars)
Khulna	Koira	US\$ 0.36 (BDT 2.50 crore)	2.5	US\$ 0.21 (BDT 14102400)	6805.8 (upto May '10)	400	US\$ 0.142 m (1 crore BDT)
	Dacope	US\$ 0.36 (BDT 2.50 crore)	2.5	US\$ 0.66 (BDT 46417600)			
Sathkhira	Ashashuni	US\$ 0.36 (BDT 2.50 crore)	2.5	US\$ 0.48 (BDT 46417600)	1800 (upto May '10)	550	
	Shyamnagar	US\$ 0.47 (BDT 3.29 crore)	2.5	US\$ 1.42 (BDT 100454400)			

### Allocation of Fund for Homeless People Living on the Embankment

BDT 96 crore (US\$ 13.71 m) allocated for construction/ repair of household of 48,000 homeless people who took shelter on the embankment. BDT 76 crore (US\$ 10.86 m) allocated for 38000 families of Khulna (Koyra and Dacope). BDT 20 crore (US\$ 2.85 m) allocated for 10000 families of Sathkhira (Shyamnagar and Ashashuni). (BDT 12,000 to buy 2 bundles of CI sheets and BDT 8,000 for other necessary equipments/materials, total of BDT 20,000 for each affected families

## **7.5 Needs and Priorities (Short –Term)**

1. Restoration of livelihood
2. Construction of cluster houses for landless people
3. Reconstruction of houses for affected people
4. Ensure safe drinking water
  - a) Desalination plant
  - b) Re-excavation & digging new ponds
  - c) Installation of deep tube well
  - d) Rain water harvesting

## **7.6 Needs and Priorities (Long-Term)**

1. Construction of cyclone shelters with killas (elevated land for shelter of livestock)
2. Reconstruction/Construction of embankment with modified design
3. Disaster resistant housing
4. Disaster resilient cluster village
5. Reconstruction of educational institutions
6. Reconstruction/Construction of roads

### **Emergency livelihood programs taken by NGOs (approved by NGO bureau)**

- No. of NGOs : 51
- Total no of projects : 64
- Total Approved Fund : US\$ 6.35 million
- Total Beneficiaries (Family) : 374,284

## **7.7 Disaster Recovery Act/ Guidelines**

1. Specific Relief Act 1877
2. Voluntary Social Welfare Agencies Act 1961
3. The Foreign Donations (Voluntary Activities) Regulation Ordinance, 1978.
4. Standing Orders on Disasters 2010
5. Disaster Management & Relief Act 2011
6. Guidelines of CFW, FFW. EGPP, REOPA, VGD, VGF etc

## 8. Constraints and challenges

- The Bangladesh government has implemented a range of social protection program but there is no national strategy paper. There should be a National Policy on Social protection. The Integrated Safety Nets Policy Guidelines are also needed for development of a multi-year livelihood recovery programme
- There is no Social Protection Act/ Law including the livelihood recovery act. Though the DM act has been approved by the cabinet , but there should be separate Social Protection Counter measure law
- Bangladesh has an elaborate system of social safety nets operated by 13 different ministries and some NGOs covering various target group. Some of these programmes are food based, some are cash based, and some are both food and case based. Consolidate, coordinate and linkage with all safety nets are difficult task.
- Targeting effectiveness needs to be improved to ensure that the benefits of the programmes reach the real effected people
- The livelihood recovery programme should also include capacity building at various levels to improve the management of these safety net programmes.
- Need to establishing the database for the affected people for victim registration and tracking.
- A key challenges for effective livelihood program is design innovations based on ground realities including the pre-disaster recovery plan
- Coverage of all the affected people specially for constructing houses is a great challenges.

## **9. Disaster victims Livelihood Recovery Support System in Japan**

The Disaster Victims Livelihood Recovery Support System is based on the Act on Support for Livelihood Recovery of Disaster Victims, which was enacted in 1998 following the Great Hanshin-Awaji Earthquake of 1995. Under this system, a “livelihood recovery support payment for disaster victims” is disbursed to persons whose livelihoods are severely damaged by disasters. The purpose of this system is to support victims in recovering their normal lives, bring stability to the lives of residents, and facilitate the quick recovery of disaster-stricken areas. Specifically, the livelihood recovery support payment for disaster victims is disbursed to households whose homes are completely destroyed in disasters of a certain scale or greater, up to a maximum of three million yen.

### **9.1 Contents of Disaster Recovery and rehabilitation Measures**

#### **① Disaster Recovery Project**

The recovery of damaged public infrastructure facilities, educational facilities, welfare facilities and agricultural, forestry and fishery facilities is either conducted directly by the national government or put into practice by the local government with subsidies from the national government.

#### **② Disaster Relief Loans**

Persons engaged in the agriculture, forestry or fishery industries, small and medium enterprises and low-income people who incurred damage are eligible for a variety of low-interest loans with rather generous conditions as compared to normal ones.

#### **③ Disaster Compensation and Insurance**

Affected persons engaged in the agriculture, forestry or fishery business can obtain compensation for disaster losses. Earthquake insurance system has been established by the national government.

#### **④ Tax Reduction or Exemption**

For affected persons, measures are taken for the reduction, exemption and postponed collection of income and residential taxes.

#### **⑤ Tax Allocation to Local Governments and Local Bonds**

For affected local governments, measures such as delivery of special tax allocations and permission to issue local bonds are taken.

#### **⑥ Designation of Extremely Severe Disaster**

When a disaster causes extremely severe damage, it is designated an “extremely severe disaster.” Various special measures are to be taken for disaster recovery projects.

#### **⑦ Assistance for the Rehabilitation Plan**

Assistance is provided, when necessary, for local government rehabilitation plans, which should be quickly and accurately formulated and implemented.

#### **⑧ Support for the Livelihood Recovery of Disaster Victims**

Assistance is provided for victims to support their self supporting efforts through disaster condolence money, disaster impediment sympathy money, money for support of livelihood recovery of disaster victims and loans such as disaster relief funds and livelihood welfare fund (Source : Cabinet Office, Japan Government )

## **9.1 Japanese Disaster Relief Act**

- Emergency relief
  - Emergency or temporary relief following a disaster
  - Distinct from restoration activities
- Protecting victims and maintaining social order
  - Part of the purpose of the act (Article 1)
  - Measures taken according to the scale of the disaster
- Central government provides services in cooperation with local public entities
  - Relief personnel and resources provided as necessary in cooperation with local public entities

### Outline of the Current Act

- Purpose
  - To provide central government services in cooperation with local public entities
  - To provide relief services on an emergency basis
  - To protect disaster victims and maintain public order
- Administration
  - In places designated as disaster areas by declaration of the prefectural governor
  - Activities administered by municipal governments  
(some relief work may be entrusted to other agencies)
- Criteria for invoking the act
  - Damage to homes or other essential facilities
  - Risk of injury or loss of life

### **9.1.1 Types of Relief Activities**

- Provision of accommodation including emergency temporary housing
- Distribution of food and drinking water
- Distribution of clothing, bedding and other necessities
- Medical and natal care
- Rescue of disaster victims
- Emergency repairs of housing
- Distribution of school supplies
- Financial support to restore livelihood.

### **9.1.2 Scope, Methods, time, Periods of Activities**

- Determined by the prefectural governor, pursuant to regulations of the Ministry of Health, Labour and Welfare
- The regulations specify types of activities, expense limits, time periods, etc.

- Refer to the Regulations for Disaster Relief, 2008

#### Standard for invoking the Disaster Relief Act

- Damage to homes or other essential facilities
  - When homes of a specified number of households are destroyed
  - In proportion to the population of the municipality, or
  - In proportion to the population of the prefecture and the municipality, or
  - In proportion to the population of the prefecture
- Risk of injury or loss of life
  - When many people are at risk or likely to be at risk of personal injury or death

### **9.1.3 Compensation Payments**

- Compensation for Death
  - Administration
    - Municipal government
  - Disaster situation
    - Natural disaster
  - Destruction of at least five households in a single municipality
  - Designation of at least one municipality within the prefecture as a disaster area
  - Eligible relatives
    - Spouse, children, parents, grandchildren, grandparents
  - Amounts
    - Death of household provider: 5 million yen
    - Other death: 2.5 million yen

### **9.1.4 Compensation for Disability**

- Administration
  - Municipal government
- Disaster situation
  - Natural disaster
- Destruction of at least five households in a single municipality
- Designation of at least one municipality within the prefecture as a disaster area
- Eligibility
  - Persons seriously disabled by the disaster
- Amounts
  - Household provider: 2.5 million yen
  - Other person: 1.25 million yen

### **9.1.5 Disaster relief Loan**

- Loans for Disaster Relief
  - Administration
    - Municipal government
  - Disaster situation
    - Designation of at least one municipality within the prefecture as a disaster area
  - Eligibility
    - Persons injured or suffering damage to home or possessions in the disaster
  - Maximum loan
    - 3.5 million yen
  - Repayment period
    - 10 years (payments deferred for 3 or 5 years)

### **9.1.6 Responsibilities for emergency Relief Under disaster Relief Act**

- Responsibilities of the central government
  - Data collection, personnel assignments, technical advice, etc.
- Responsibilities of prefectural governments
  - Collection and dissemination of damage information, performance of relief work (invocation of the Disaster Relief Act), personnel assignments, etc.
- Responsibilities of municipal governments
  - Collection and dissemination of damage information, performance of emergency relief work, etc.
- Japan Red Cross
  - Dispatching of rescue squads, etc.



- Invocation of the Disaster Relief Act (1998 - 2007)
- Invocations during 2007: 5 prefectures, 15 municipalities

Source: Office of the Disaster Relief Program, Social welfare and Relief Bureau, Ministry of Health, Labour and Welfare, 2009, The Japanese Disaster Relief Act

#### **9.1.7 Act on Support for livelihood Recovery of Disaster Victim 1998**

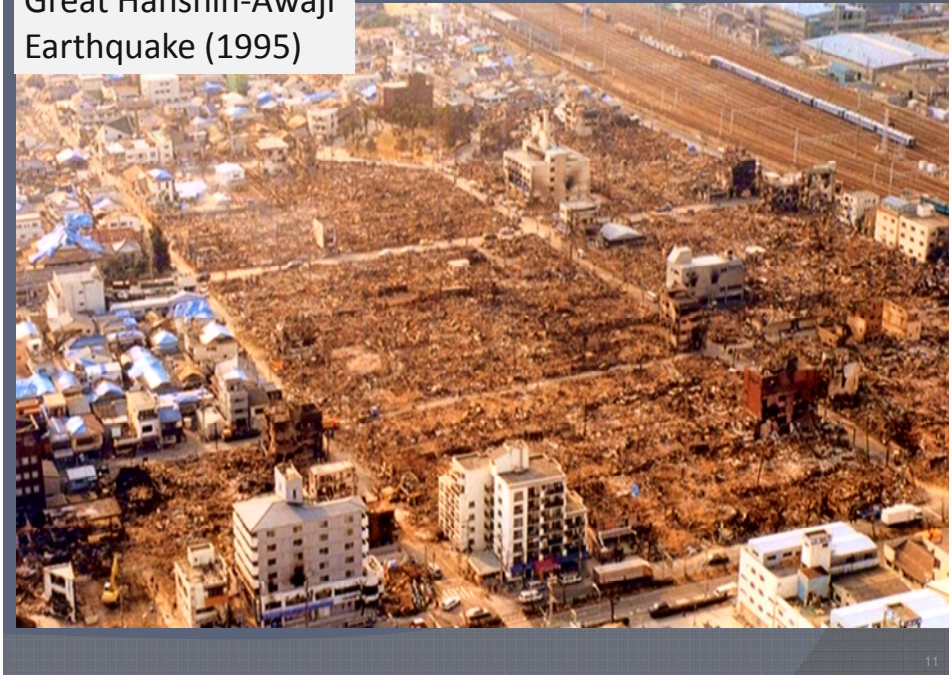
General Provisions:

This Act shall be determined measures to grant financial assistance to victims of life reconstruction fund to take advantage of remarkable person who has suffered the damage to their livelihood by natural disasters, the prefecture had contributed in terms of mutual aid by, to support the reconstruction of their lives, and thereby to contribute to the rapid reconstruction of the affected areas and the stabilization of life of residents have.

The damage caused natural disasters, storms, heavy rain, heavy snow, flood, storm surge, earthquake, tsunami, volcanic eruption by other unusual natural phenomena, household affected by natural disaster shall be specified by a Cabinet Order.

## 10. A Case Study of Recovery Program In Japan

Great Hanshin-Awaji  
Earthquake (1995)



At 5:46 a.m. on January 17, 1995 the Great Hanshin-Awaji earthquake, which struck right under the city of Kobe in Western Japan, caused heavy damage. More than 240,000 buildings were completely or partially destroyed, and more than 6,400 people lost their lives. Over 80% of those who died were crushed or suffocated by damaged structures. Most of the damaged buildings had been built before the building code standards were upgraded in 1981.

Following the Great Hanshin-Awaji earthquake, the Government of Japan developed and strengthened disaster management systems. In 1995, the government amended the "Disaster Countermeasure Basic Act" and enacted the "Special Measure for Earthquake Disaster Countermeasure Act."

### 10.1 Overview of Damages

- **Death and Missing toll 6,437**
- Death toll 4,571
- Damage of building and structure 67,421 fully, 55,145 partly
- Gross area of structure totally burnt 819,108 sq.m
- Electricity- disconnected city wide
- Telephone -25% disconnected
- Water -failure almost citywide
- Gas about – about 80% disconnected
- Small and medium enterprise—50% completely destroyed
- Shopping arcade- 50% severely damaged
- Number of fire incidents : 175

### Recovery Process

- Organization of search and rescue teams
- Setup of evacuation shelters

- Provision of hot meal
- Provision of safe drinking water
- Construction temporary housing

### 10. 1 Formulation of Kobe City recovery Plan

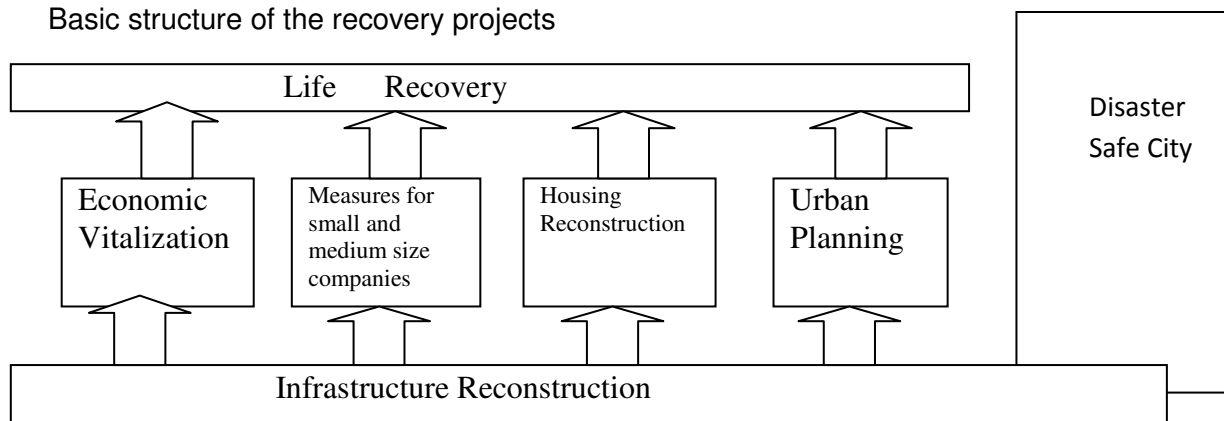
The Kobe City Recovery Plan consists of 2 blocks; the first block as a foundation is "Recovery Plan Guidelines", and the second block is the recovery plan itself. Field –specific plans were prepared by each department of the Kobe city government in charge, which formed detailed plans under the city recovery plan. The Recovery Plan by goal are :

1. Recover Citizens Life
2. Recover Industry
3. Recover Livelihood
4. Strengthen Disaster Response Capacity
5. Promote Collaborative Community Development

### 10.2 Kobe City Recovery Project (1000)

1. Infrastructure Reconstruction
2. Housing Reconstruction/ Restoration/
3. City Planning/ Urban Renewal
4. Economic vitalization
5. Measures of SMEs
6. Livelihood recovery
7. Disaster –Safe City

Basic structure of the recovery projects



- The top line shows life recovery for the survivors of the disasters. Infrastructure and housing reconstruction and job securement are prerequisite to help victims return to the self-sustainable lives they led before the disaster.

#### Support for Housing:

- Kobe City Special housing loans for recovery from the disaster ( Interest rate 2.8% )
- Housing Reconstruction loans for Hyogo Prefecture Residents ( Interest rate 1.5% )
- Financing system for elderly people
- Support for large scale repair

#### Economic Vitalization

- The economic blow caused by the earthquake is estimated to be around 2 trillion 540 billion yen and the opportunity loss in economic activities over 5 trillion yen.

- Economic vitalization means job securement. This means protect SMEs that produce local job opportunities
- Recovery Industry/Employment

### **10.3 Three Basic view Points of Economic Recovery**

- Respect of the Market Mechanism that allows choice by the local communities
- Program Packaging and Required Development of social experiment ( Type Policies )
- Establishment of Governance by various bodies

### **10.4 Post Earthquake Livelihood Situation and Process for Recovery**

The major reasons for unemployment caused by a huge disaster are bankruptcy, business closure and business shrinkage. Among the impacts due to a huge disaster on industry/economy, unemployment benefits is possibly the most serious one. The average job loss was 31000 per month. Taking as an example the number of unemployment benefits recipients, it grows from 10,000 in the month prior to the earthquake to 27000 in April. Under the Employment Expansion Program Kobe/ Hyogo Prefecture carried out various unemployment benefits:

#### **1. Promotion of Employment Securing Measures-**

- Job exploitation by Employment development Promotion Team
- Utilization of employment development subsidy for specified job seekers
- Financial incentives for employment for quake victims

#### **2. Job maintenance support at companies**

- *Fureai* Hello Work Program ( job application, job counselling, job referral, training)
- Organizing joint job interview
- Utilization of Care Card for counselling of job seekers
- Support of the quake victims moving out of the prefecture

#### **3. Promotion of Job assistance measures**

- Implementation of Job Development Program in quake hit area
- Work program for elderly

#### **4. Implementation of livelihood support measures**

- Implementation of loan for livelihood stabilization of displaced workers
- Utilization of Employment Insurance System

#### **5. Community Business**

- Community business composed of local inhabitants and volunteers is a program that tries to meet diverse and individual needs found in the community.

Source: City of Kobe, 2010, Comprehensive Strategy for Recovery from the Great Hanshin- Awaji Earthquake

### **10.5 Hanshin Awaji Reconstruction Plan**

**Basic Theme** ■ Harmonious Coexistence Between People and Nature,

People and People, and People and Society

**Basic Goals** ■ Creation of a welfare society tailored for the 21st century  
Creation of a culturally rich society open to the world

**Basic View** ■ Creative Reconstruction

- Creation of a society where existing industries grow and new industries flourish
- Creation of a disaster-resistant metropolis where people can live with confidence
- Formation of a multi-centered network-type metropolitan area

**Duration** Established July 1995 ■ Target Year 2005

**Expenses**

Planned Amount : \$170 billion (660 Projects)

Actual Amount : \$163 billion (1,358 Projects)

**Collaboration of Citizens, NPOs, Corporations and Governments**

- An. Earthquake Victim Reconstruction Support Committee formed.
- In addition to “Self support” and “Public support”, “**Mutual support**” is important
- **Collaboration** of Citizens, NPOs, Corporations and Governments
- **Consists of scholars, supporters, volunteer group etc.**

**Act on Support for Livelihood Recovery of Disaster Victims (May 1998)**

Under this act there was a provision of Grant for Elderly Households, but they were not sufficient to meet the needs of the earthquake victims. The laws was then revised in 2007 and making available an additional grant between 500,000 yen to 2million yen.

The “Act on Support for Livelihood Recovery of Disaster Victims” has been applied to disaster that have occurred since then, and, as of October 2009, a total of 22.8 billion yen has been provided to approximately 17,700 households.

**10.6 Seven Elements of Life Recovery (05Years after EQ)**

- **Workshop on life recovery hold ( Ideas from 1623 victims )**
- Housing ( No. 1 Priority -30.1% )
- Social Ties ( Mutual Support and support for Elderly- 25.1% ) )
- Community Rebuilding ( Better Living Condition-12.1% )
- Physical & Mental health ( 9.5% )
- Preparedness ( alert for future disaster-9.5% )
- Economic and Financial Situation ( Employment- 8.5% )
- Relation to Government ( support the Area not the individual-5.2% )

**Recovery of Civic life Assessment ( 2003 )**

- On the decline : 48.0%                      Effect of recession                      : 57.6%
- Don't know                      : 6.1%                      Illness and retirement                      : 22.4%
- Improved                      : 6.7%                      Effect of earthquake                      : 15.1%
- The same                      : 39.2%                      Other reason                      : 4.9%

- A questionnaire on economic and financial situation sent to 10,000 Kobe citizen and 48% answered that their situations has gotten worsen since the earthquake. This is because of the Livelihood and employment were not given the highest priorities in the recovery process. (Source : City of Kobe, 2010, Comprehensive Strategy for Recovery from the Great Hanshin- Awaji Earthquake)

## 11. Lessons Learned and Challenges

- ✘ As the recovery process varies according to the location and nature of disaster - Need to decide what kind of livelihood recovery process should be carried out ( Need Based )
- ✘ Basic concept of Support System ( Community or Individual )
- ✘ What kind of arrangement are needed to fulfill the individual need ( Can't not support all the individual need of shelter and employment )
- ✘ Identify the individual's basic need during normal time
- ✘ Public support is not enough , mutual help/aid is needed
- ✘ Reconstruction of Housing requires huge budget ( donation from the prefectures are not sufficient )
- ✘ Employment and Job creation for all the victims is a difficult task.
- ✘ Pre-disaster planning of one experiences may not be applicable for other upcoming disaster as the nature, magnitude , area/location, social or economic system are different ( for example of great Hanshin-Awaji disaster and Tohoku disaster)
- ✘ Relocation of victims with different community
- ✘ Municipality or Prefecture needs special fund to address the individual needs
- ✘ Revision of Livelihood Recovery Act 1998
- ✘ External economic recession
- ✘ Earthquake Insurance system- Difficult to measure risks
- ✘ Due to the absence of victim registration , data base profile of the victims or tracking system their previous livelihood status or change of profession after disaster can not be identified
- ✘ Livelihood baseline assessment is necessary
- ✘ Benefits according to the income level is not rational
- ✘ 3 system for providing a Safe City- i) Disaster-preventive management ii) Disaster – preventive living zone iii) Disaster-preventive city infrastructure
- ✘ PDCA cycle is a continuous process
- ✘ Don't have any information how many people became disabled after disaster -Survey is required
- ✘ Establishment of life recovery HQ ( shelter, temporary/ permanent housing, employment, health etc)
- ✘ Mutual help, self help , neighborhood help and community help is necessary for disaster mitigation
- ✘ DM requires coordinated by individuals , communities and governments
- ✘ new way of living with community businesses

## 12. Comparative Study of DM System and livelihood Recovery Program in Japan and Bangladesh

JAPAN	BANGLADESH
<ul style="list-style-type: none"> <li>✗ Disaster Prone-Earthquake, volcanoes, Tsunami</li> </ul>	<ul style="list-style-type: none"> <li>✗ Disaster Prone-Earthquake, volcanoes, Tsunami</li> </ul>
<ul style="list-style-type: none"> <li>✗ Pioneer in DM &amp; DRR since 1959</li> </ul>	<ul style="list-style-type: none"> <li>✗ Paradigm shift in 1991 from relief to comprehensive DM &amp; DRR</li> </ul>
<ul style="list-style-type: none"> <li>✗ Strong DM Basic Countermeasure Act ( formulated in 1961).Updated regularly</li> </ul>	<ul style="list-style-type: none"> <li>✗ DM Countermeasure Act yet not crystallized ( DM Act 2011 )</li> </ul>
<ul style="list-style-type: none"> <li>✗ Reform in the Central Govt. system in 2001, a position of Minister of State for DM was newly established. Furthermore a DG for DM was placed in Cabinet Office</li> </ul>	<ul style="list-style-type: none"> <li>✗ A new division established in 2009 to deal with DM affairs exclusively named “ Disaster Management and Relief division”</li> </ul>
<ul style="list-style-type: none"> <li>✗ Disaster Management in 03 Layer( National, Prefecture and Municipal level )</li> </ul>	<ul style="list-style-type: none"> <li>✗ Disaster Management in 04 Layer( National, District, Upazila and Union level )</li> </ul>
<ul style="list-style-type: none"> <li>✗ Community mobilization and strong Community to response against any kind of disaster. Every citizen knows the concept of self help, mutual help/ neighbor help and community help during disaster</li> </ul>	<ul style="list-style-type: none"> <li>✗ Govt. play major role after disaster .Community mobilization and community volunteers expanding gradually.</li> </ul>
<ul style="list-style-type: none"> <li>✗ Specific Act on Support for Livelihood Recovery of Disaster Victims 1998 and revised in 2007.</li> </ul>	<ul style="list-style-type: none"> <li>✗ No specific Livelihood Recovery Act/ Law, but guidelines are present</li> </ul>
<ul style="list-style-type: none"> <li>✗ Formulated Pre-disaster and post disaster recovery plan</li> </ul>	<ul style="list-style-type: none"> <li>✗ National Plan for Disaster Management present</li> </ul>
<ul style="list-style-type: none"> <li>✗ Central Govt. plays major role for damage assessment and technical</li> </ul>	<ul style="list-style-type: none"> <li>✗ Local Bodies plays major role for damage assessment</li> </ul>

<b>support after disaster</b>	
<b>✘ Sufficient Budget for DRR</b>	<b>✘ Insufficient budget allocation of DRR</b>
<b>✘ Efficient DM system for Earthquake and other disaster</b>	<b>✘ Efficient DM system for Cyclone , but Urban DM system ( Earthquake ) yet not crystallized</b>
<b>✘ More emphasis on Life Line Recovery ( Road, gas, electricity, housing , employment etc)- holistic approach which has direct link with livelihood recovery</b>	<b>✘ Specific emphasis on livelihood recovery program, but not an integrated approach</b>
<b>✘ No tracking system for the victims</b>	<b>✘ Short term tracking system for the victim present</b>
<b>✘ Disaster relief loan, community business activities, employment, insurance, low interest housing fund,</b>	<b>✘ Different DRR projects including cyclone resistance housing facilities present</b>
<b>✘ Shelter/housing construction is the main basis for livelihood</b>	<b>✘ Food Security, shelter and employment are the main basis for livelihood</b>
<b>✘ Un-employment allowances for 06 months</b>	<b>✘ No provision for Un-employment allowances</b>



## 13 CONCLUSION

In order to improve understanding of the impact of disaster on livelihoods this research work tried to highlight the meaning of recovery plan, program, especially livelihood recovery in a country situation. It also describes the lesson learned from the recovery process. The findings clearly defined that the life recovery is the main component for the survivors of the disaster. Infrastructure reconstruction, housing, job securement, employment are prerequisite to help victims return to the self-sustainable lives they lead before the disaster. In order to support the life recovery of the victim, it is essential to deal with multilayered support issues covering essentially all aspects of people life, such as housing and employment, social ties, community rebuilding, economic and financial situation etc.

The findings also identified that after the formulation of Kobe City recovery plan 1000 recovery project has been implemented to sustain civic life. The Kobe Authority emphasized housing is the basis for life recovery. But after the tenth year comprehensive recovery assessment it was found that out of 10,000 Kobe citizen 48% answered that their situation had gotten worsen since the earthquake, 39.3% answered that situation were the same as before. This may happened of the special emphasis were not given for the individual livelihood recovery. More importantly disaster affected population have overwhelmingly identified livelihood as their greatest recovery priority. So livelihood and employment recovery should be given highest priority in the overall recovery process

Livelihood recovery plan or guidelines are primarily considered two major issues in facilitating a more responsive sustainable livelihood recovery and protection. These are i) Enabling livelihood protection ii) Improving livelihood promotion. In both cases strong countermeasure act/law need to be incorporated to mitigate the sufficient need of the victims. It is also recognized that while comparison the pre-disaster life recovery planning or post-disaster program of two region in same country or different countries there is no guarantee that the same activity will generate similar results as the nature, magnitude, area/location, social and economic system are different from others. But there are some commonalities across the nation with respect to recovery and reconstruction in the post-disaster era. In the Great Hanshin-Awaji earthquake 30,000 people were buried underneath debris, 80% of them were rescued by the local people. The people can help the people. That's mutual help. A single person and the government alone can not carried out the whole recovery process. It is necessary to share the role appropriately and co-operate among citizen, community and local/national government. This kind of co-operation framework can be adopted by the other countries irrespective of cultural differences. In the case of the issue of livelihood, the effective work in the recovery process represents that the community based reconstruction in general results in greater satisfaction for the effected community go quickly back to their previous activities and restart their livelihood. The community empowerment program should be introduced during the recovery phase.

## **14. Recommendations**

The following Japan's experiences may be replicated in the Disaster management system of Bangladesh:

- Establishment of Life Recovery Head Quarters for Shelter, Temporary/ Permanent housing, employment, health etc after a big disaster.
- Besides the government help, mutual help, self help, neighboured help and community help are the main components for recovery
- New way of living with community business
- Specific Act on Support for livelihood Recovery and Disaster victims need to be formulated
- Pre-disaster recovery plan need to be formulated
- More emphasis on life line recovery ( road and other infrastructure, housing, employment) – a holistic approach which has direct link with livelihood recovery
- For long term recovery program life assessment is needed after five years period of time and in this aspect the PDCA cycle can be followed.
- Workshop in grassroots level assessment is needed to identify the opinion of the affected citizen and their livelihood options
- Establishment of Museum for the preservation of past disaster history

## REFERENCES

1. Disaster Management Bureau, Disaster Management & Relief Division, Government of the People's Republic of Bangladesh, 2010, National Plan for Disaster Management ( 2010-2015 )
2. UN/ISDR, 2010, Guidance Note on Recovery, LIVELIHOOD
3. Cabinet Office, Government of Japan, 2011, Disaster Management in Japan
4. UN/ISDR, 2010, Livelihood Recovery Experiences
5. City of Kobe, 2010, Comprehensive Strategy for Recovery from the Great Hanshin-Awaji Earthquake
6. Disaster Management Bureau, Disaster Management & Relief Division, Government of the People's Republic of Bangladesh, 2010, Standing Orders on Disaster
7. IRP,2010, International Recovery Forum 2010, " From Resilient Recovery to Sustainable Development
8. UNDP Bangladesh, PPRC, 2011, Social Safety Nets in Bangladesh
9. BIDS-PRP Working Paper, 2010, Safety Nets program in Bangladesh : Assessing the performance of selected programs
10. UN/ISDR/IRP, 2010, Guidance Note on Recovery, Telling live Lessons
11. UN/ISDR/IRP, 2010, Guidance Note on Recovery, GOVERNANCE
12. JICA Hyogo/DRLC/KCFB,2010, " BOKOMI" Guide Book
13. FAO/ILO, 2007, Disaster Livelihood Assessment Toolkit, " Analysing and responding to the impact of disaster on the livelihood people"
14. Phoenix Hyogo, 2010, "15<sup>th</sup> Anniversary of the Great Hanshin-Awaji Earthquake- A journey of creative Reconstruction"
15. Government of Japan, 1998, Support for livelihood Recovery of Disaster Victims.
16. Office of the Disaster Relief Program, Social welfare and Relief Bureau, Ministry of Health , Labour and welfare , 2009, The Japanese Disaster Relief Act
17. Kobe city, 2012, Presentation of Life Recovery from the Great Hanshin–Awaji Earthquake.
18. [www.ADRC.asia](http://www.ADRC.asia)
19. [www.city.kobe.lg.jp](http://www.city.kobe.lg.jp)
20. [www.dmr.gov.bd](http://www.dmr.gov.bd)
21. [www.cdmp.org](http://www.cdmp.org)
22. [www.recoveryplatform.org](http://www.recoveryplatform.org)
23. [www.kiur.jp](http://www.kiur.jp)
24. [www.bousai.go.jp](http://www.bousai.go.jp)