Japan Brand ODA

Contribution to
Build a Disaster Resilient Society

# BOSAI: Disaster Risk Reduction

Disaster Risk Reduction is a series of efforts to reduce
economic and physical loss in case of disasters,
to ensure the overall development process is not disturbed.
Due to its geography, topography, and climate,
Japan is a “disaster-prone country” that has seen events ranging from
earthquakes and volcanic eruptions, typhoons, rain induced flooding, and landslides.
The first DRR project in Japan goes back to the 8th Century.
Ever since then disaster risk reduction has always
been a priority in ruling the country.
Long history has built abundant knowledge and experience in minimizing damage,
and Japan hopes to contribute to similar efforts in other countries.

JICA

Unique know-how, experience and technologies originating in Japan and cultivated at international cooperation sites around the world are proving useful in the field in many developing countries.
JICA is disseminating these methods and program models that are effective for solving problems to the rest of the world as the Japan Brand of international cooperation and promoting its use.

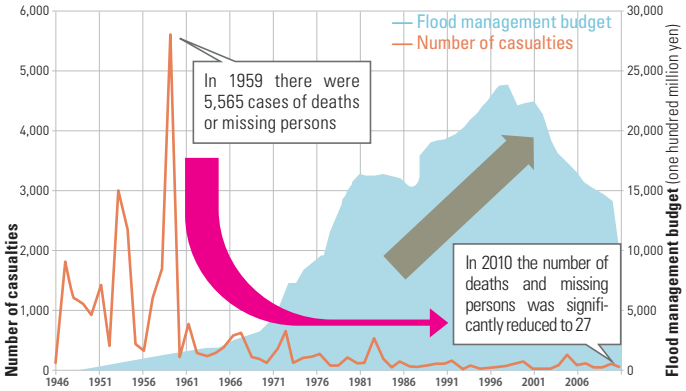
## Successful efforts to reduce casualties from 5,000 in 1959 to 27 in 2010

Japan has continuously strengthened disaster risk reduction systems in order not to repeat same damages in future disasters.

The Typhoon Vera in 1959 which killed more than 5,000 people was a wakeup call to Japan. Based on the Disaster Countermeasures Basic Act, the Government of Japan prepared a national disaster reduction framework (establishment of the Central Disaster Management Council, the Basic Disaster Management Plan, and the Act on Special Financial Support to Deal with Extremely Severe Disasters, and other such measures, etc.) and established a system for long-term flood control planning policies (Soil Conservation and Flood Control Urgent Measures Act, 10 Year Operation Plan for Soil Conservation and Flood Control, etc.). These efforts have successfully reduced deaths attributable to flooding to 1/100th of previous levels.

The Government of Japan has seized the Kobe Earthquake as another chance to enhance earthquake disaster prevention frameworks.

### Budget and number of deaths and missing persons, in relation to long term flood management plans




The successful reduction in deaths in accordance with the huge allocation of budget symbolizes the government's efforts.

## The public learns, and understands

Disaster Management in Japan was not established overnight. The experience to overcome large natural disasters helped the public to recognize the importance of preventative measures.

At the present day the concept of disaster risk reduction are ingrained in the minds of each and every Japanese citizen. It requires more than administrative guidance and enforcement of structures to prepare and respond to disasters. In Japan, the government, the administration, the community, and individuals are organized to engage in disaster risk reduction.

## "Mainstreaming"and "Build Back Better" -to build a more resilient society

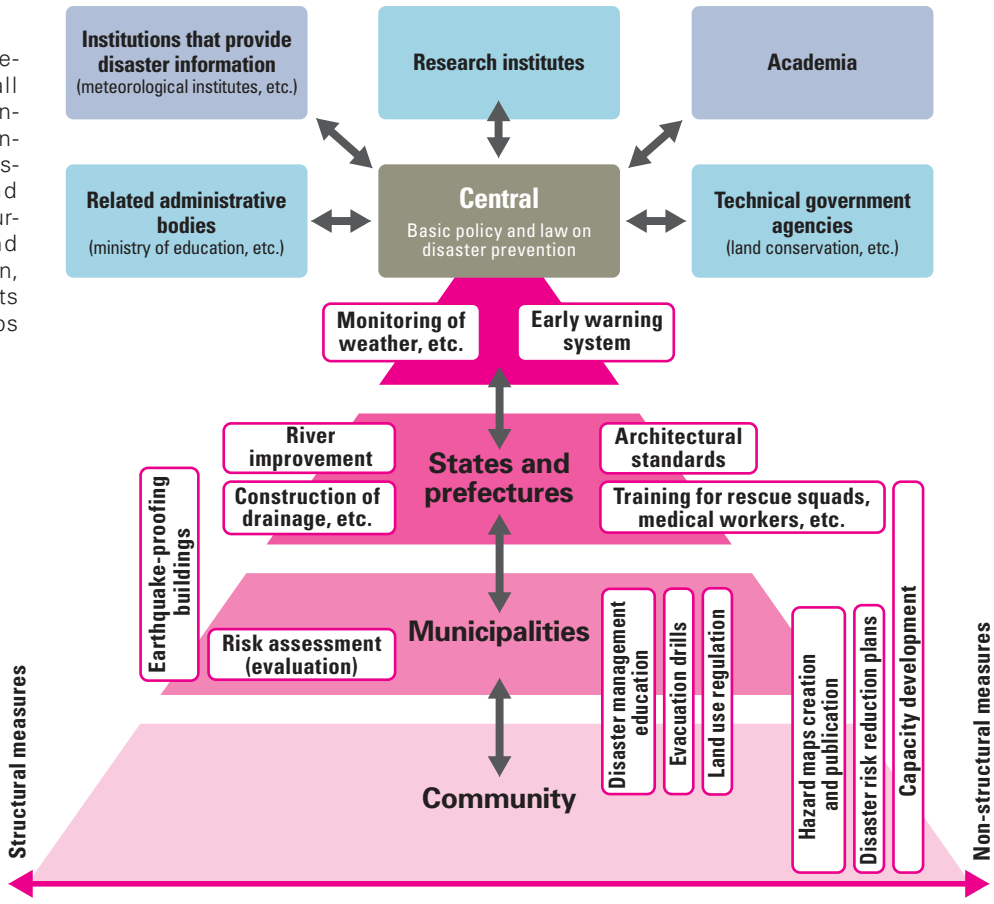
Japan continues its efforts in making the country more resilient by 'mainstreaming disaster risk reduction,' which is a concept to incorporate the perspectives of disaster risk reduction into other public sectors.

In an unfortunate case of a disaster, the government also introduces the reconstruction strategy of 'Build Back Better' which enables to eliminate the weakness in the system and to improve the ability to prevent and respond to future disasters. The disaster reduction system in Japan has been strengthened after each large scale disaster experiences.

### All stakeholders, all sectors

Disaster risk reduction requires an integrated effort by stakeholders on all levels. The Japanese government continues to strengthen structural and non-structural measures, technical/administrative organizations agencies and research institutions while also encouraging technology development and improvement in observation, prediction, warning and evacuation. These efforts improve efficiency while filling in gaps and missing links.

Trainees observing a hydraulic model experiment. Knowledge in Japan is a useful reference to developing countries to develop their own disaster risk reduction system.



## Global leader of disaster risk reduction
## -Contribution to the Third United Nations World Conference on Disaster Risk Reduction-

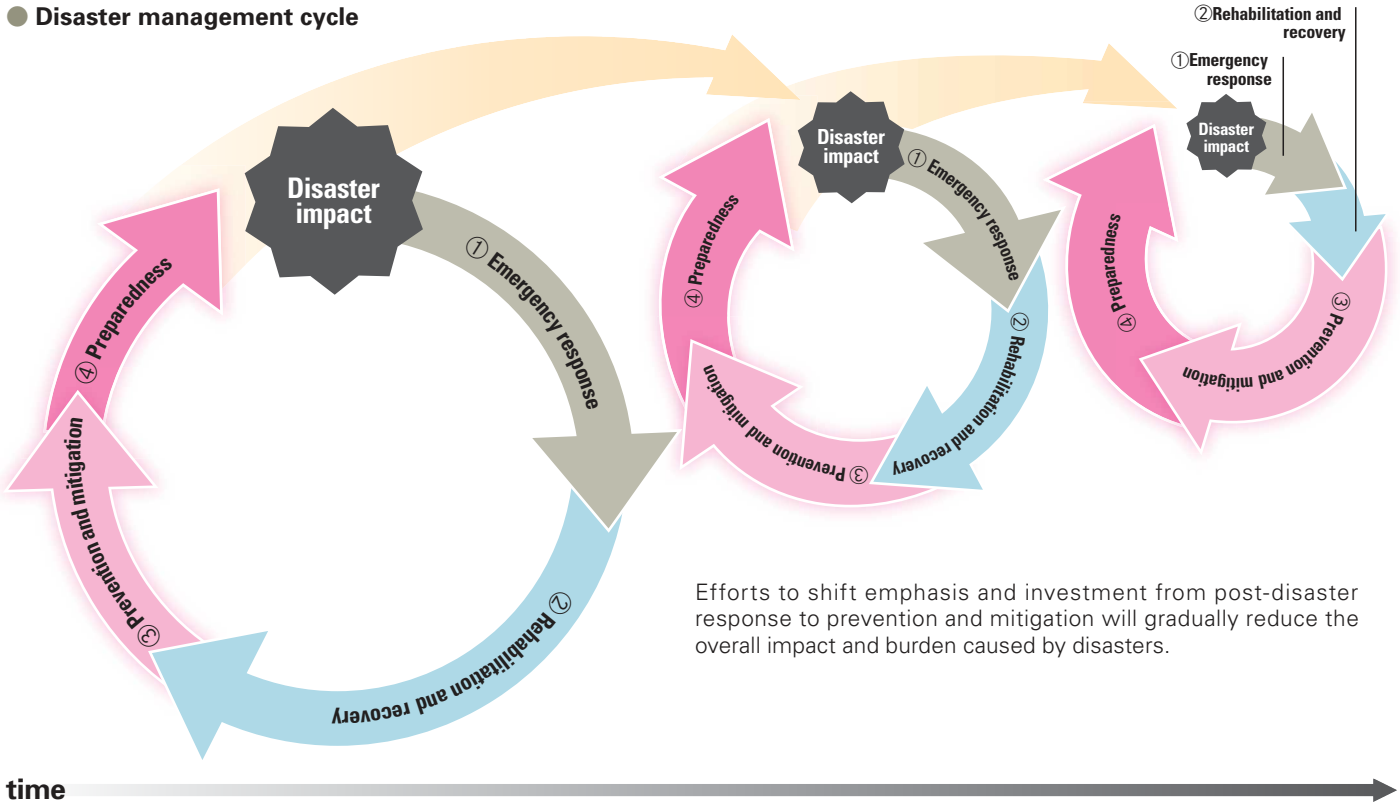
The 'Sendai Disaster Risk Reduction Framework' which was adopted at the Third United Nations World Conference on Disaster Risk Reduction in March 2015, identified 4 priority areas:

1) Understanding disaster risk
2) Strengthening disaster risk governance to manage disaster risk
3) Investing in disaster risk reduction for resilience
4) Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction

These priority areas and strategies are based on lessons learnt through JICA's activities in the disaster risk reduction sector, which originally were gained through long efforts and experience within Japan. The 'Sendai Disaster Risk Reduction Framework' explicitly proves the global recognition of these important strategies.

Japan's experience and knowledge enables JICA to provide a best balanced assistance of structural and non-structural measures, also with good consideration of social and cultural backgrounds of each developing country. JICA contributes in reducing social imbalances by paying close attention and consideration to gender and the most vulnerable population.

### Disaster management cycle




Efforts to shift emphasis and investment from post-disaster response to prevention and mitigation will gradually reduce the overall impact and burden caused by disasters.

## Peru

### A joint support by the public and academic sector to improve the disaster management cycle

JICA has been supporting Peru to reduce disaster risk for nearly 40 years, which includes the establishment of the 'Japan Peru Earthquake Disaster Prevention Center'.

JICA comprehensively supports Peru in its disaster management cycle of 'evaluation', 'prevention', 'mitigation', 'preparation', 'response', 'rehabilitation', and 'reconstruction'. JICA also works with organizations that scientifically analyze earthquakes and provide data to the government.

A public awareness campaign is also carried out to explain the risks of earthquakes to junior high schools and elementary schools in comprehendible terminology.


A brochure to explain research results to the general public. These are pages that show procedures of tsunami evacuation and how the quality of bricks affects the building resiliency.

## Introducing the Japanese experience to the world

JICA works to extend seamless cooperation from emergency response to rehabilitation and recovery.
Our additional experiences of operation in developing countries also enable us to respond to the requirements of each country.

### Indonesia

#### Changing houses more resilient to earthquakes

The M6.3 earthquake in Central Java on May 27, 2006 caused more than 5,700 causalities, more than 36,000 injuries and an estimated collapse of 140,000 houses. Huge damage was mainly because of vulnerably structured housings. In developing countries it is extremely difficult for governments to manage local workers to keep standards and regulations. During the process of reconstructing the damaged houses, JICA emphasized the importance of building the structures stronger than what they used to be, and presented 'Key Requirements' (material quality, structural profile of main elements, junction and linking of structural elements, etc.) of the rebuilt houses. Each reconstruction needed to be compliant to these requirements, and strengthening the certifying section was indispensable. JICA established application and certification procedures, carried out capacity training to officers in charge, while providing technical advice. This experience in Indonesia has also been incorporated in activities in other countries such as Nepal.

Examples of some buildings (in the back) that survived the earthquake by having, though inadequate, rebar and crossbeams. The collapsed private buildings did not have any reinforcements (foreground) (Nepal, May 2015)

### Bangladesh

#### By carrying out support to investment before disasters, the death toll from cyclones has fallen to 1/70th previous levels.

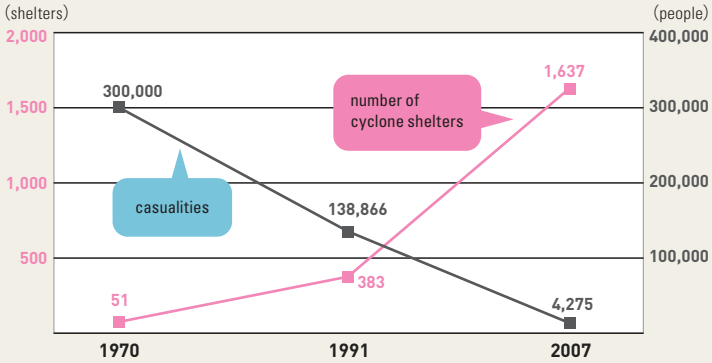
Only 20% of Bangladesh's land is located more than 9 meters above sea level. The country as well as lives, livestock, and properties are affected by large scale cyclones and floods almost every year. Japan has extended its support to Bangladesh starting with infrastructure rehabilitation support in the 1980s, and have carried out long term and comprehensive support including not only cyclone shelters but also support to strengthen meteorological observations and early warning systems.

Japan constructed approximately 120 raised-floor concrete style cyclone shelters, set up meteorological satellite imaging receiver equipment, communication circuitry, and 5 weather observation radars that cover the entire country. In parallel with construction Japan also trained the weather services staff, and have improved the system of cyclone tracking, prediction, and issuing alerts and evacuation warnings to the residents. As a result and together with development of Bangladesh as a nation, the damage and victims from cyclones in 2007 were greatly reduced.

Cyclone shelter

Predicting the path of a cyclone on a map

**Transition of numbers of cyclone shelters and numbers affected by cyclones**




Japan International Cooperation Agency Global Environment Department Disaster Risk Reduction Group
Nibancho Center Building 5-25 Nibancho, Chiyoda-Ku, Tokyo 102-8012, Japan
**Phone:** +81-3-5226-9508 **URL:** http://www.jica.go.jp/english/

Photos: JICA
January 2016