Expect the Unexpected Disasters -Mainstreaming DRR into Development-

2016.2.25

Satoru MIMURA
Japan International Cooperation Agency
Fukushima University

Japanese Experiences

Disaster experience as a motives for Preparedness

After disaster experiences, Japan exercised;

- To enhance structural measures
- To change legislations and building code
- To revise Land Use Plan
- To change institutional structure for DRRM

In order to avoid repeating tragedy, "recovery and reconstruction better than before the disasters" or Build Back Better and Prior Investment in DRR became a common understanding among Japanese.

Ise Gulf Typhoon, 21 Sep. 1959 Japan

- Max pressure 895 hPa
- Max Wind Speed 75m/s,
- Casualties 5,238

Resemble 2013 Typhoon Yolanda in Philippines

Ise Gulf Typhoon, 21 Sep. 1959 Japan

Ise Gulf Typhoon, 21 Sep. 1959 Japan

Ise Gulf Typhoon, 21 Sep. 1959 Japan

Ise Gulf Typhoon, 21 Sep. 1959 Japan

Disaster Countermeasures Basic Act 1961

Central Disaster Management Council chaired by the **Prime Minister**

National Coordinating Body with all relevant Ministers &
Japanese Red Cross, Public Broadcasting, Semi-Public Sectors
and the Academia **(The National Platform for Disaster Risk Reduction!)**

- Involvement of Semi-Public Private Sectors
  - Electricity, Gas, Telecom Companies
  - Railway and Bus Companies, Forwarders
  - Broadcasting Companies

Designated Public Organs for Disaster Management

Annual Gov't Official Report on Disaster Countermeasures

The Cabinet must officially report the disaster countermeasures to the National Diet, with
the budget of the next FY and the statements of accounts of previous FY

Formulation of "National Basic Disaster Management Plan for Disaster Prevention"

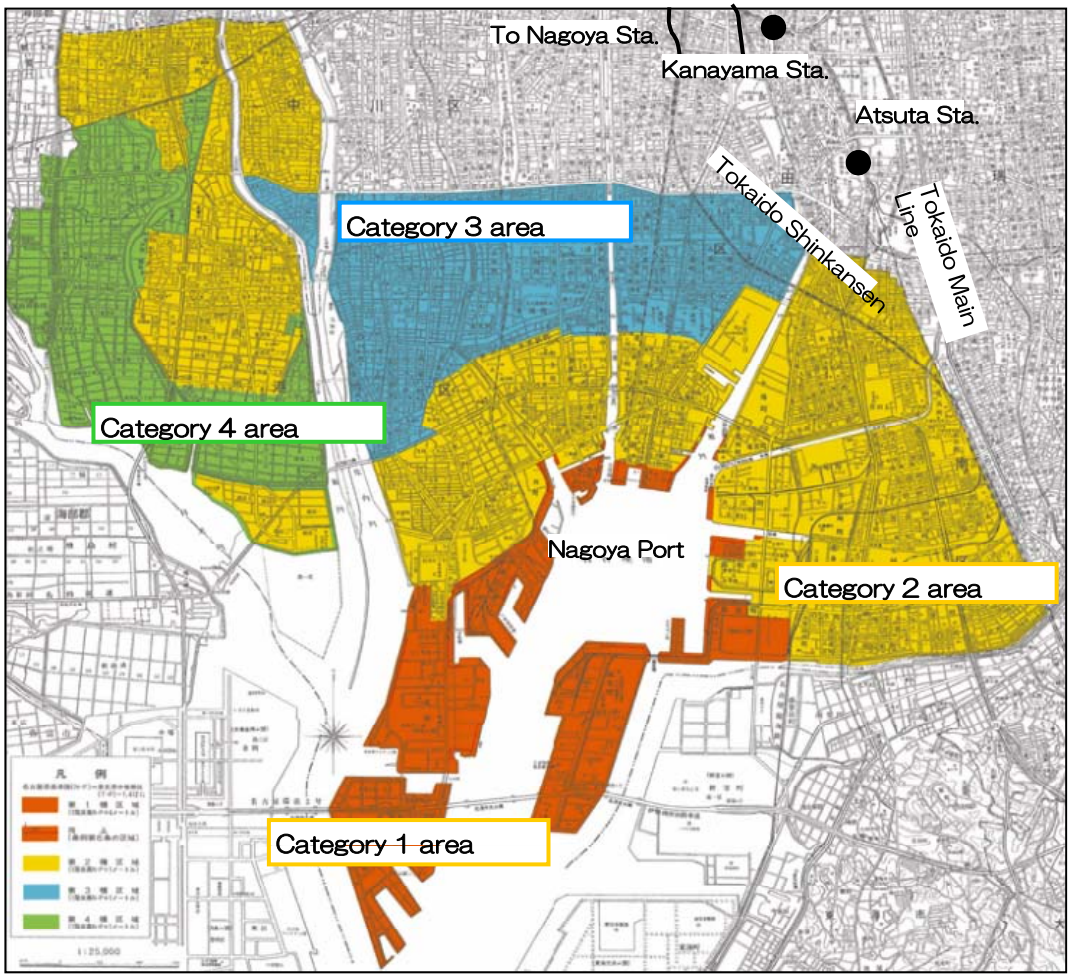
The Disaster Management Operation Plan (Sectoral)
The Prefecture and Municipal Disaster Management Plan (Regional, Local)

New Land Use Regulations for Nagoya after the Typhoon

Article 39 of the Building Standards Act, "Disaster Hazard Areas"

Costal disaster-prevention areas in Nagoya

* Where schools, hospitals, meeting grounds, public offices, welfare facilities for children, and other public architectures located in areas of Categories 2 - 4 are concerned, one or more residential spaces will be placed on the architecture with the floor height of the first floor of N・P(+) 2 m or higher, and with the height of N・P (+) 3.5 m or higher.



Source: Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan

1995 Hanshin-Awaji (Kobe) Earthquake (M7.3)

- **Casualties 6,436**
- **The Largest Scale Disaster Since 1923**
- **Directly hit the Metropolitan area of Kobe**

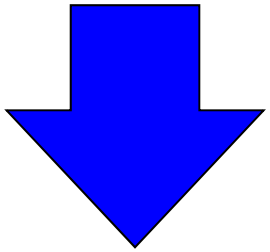
21 years from the disaster in Kobe, Japan

21 years from the disaster in Kobe, Japan

Kobe Municipal Government Headquarter

5,520 or 83% of victims were killed by building collapse

Old houses under building code before 1981 caused the most of casualties



Ensuring Building Safety

Public Awareness

Proper Action by Administrators

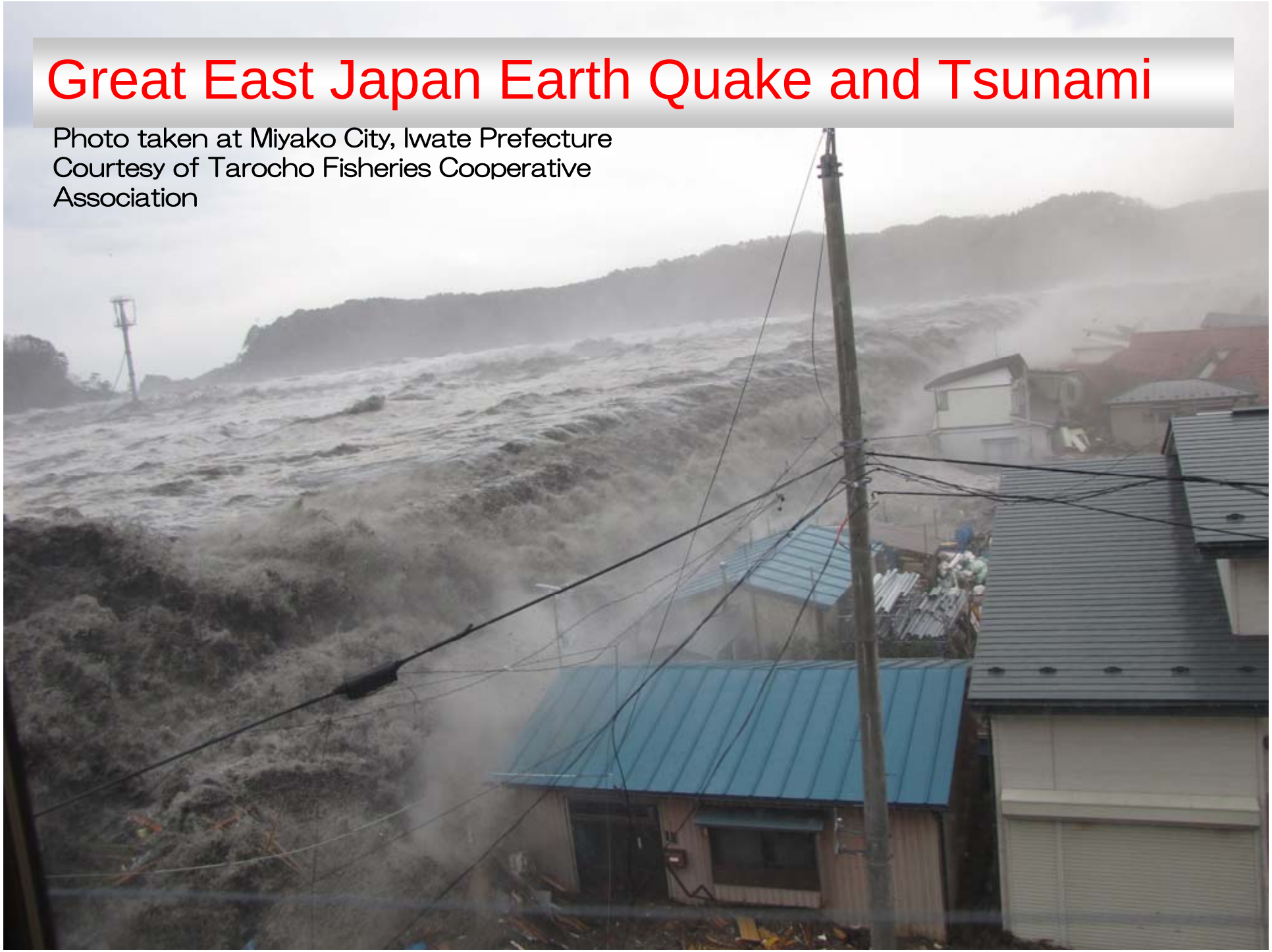
1995 new Act on Seismic Retrofitting of Existing Buildings

Public awareness campaign on housing seismic safety

Public campaign on affixing furniture and room safety

Great East Japan Earth Quake and Tsunami

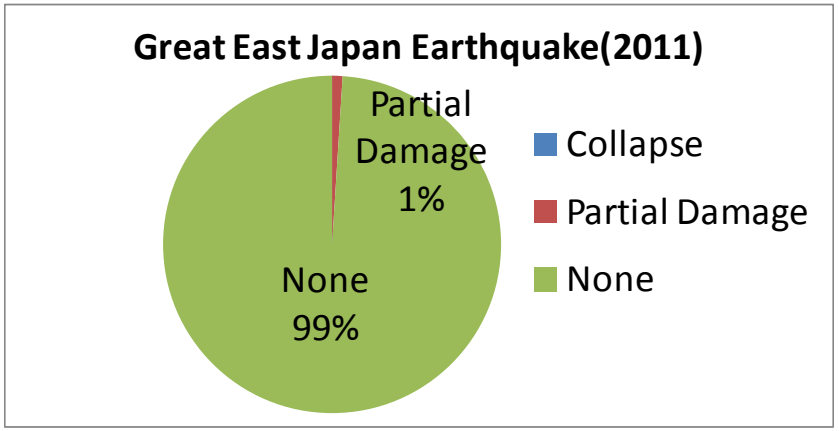
Photo taken at Miyako City, Iwate Prefecture
Courtesy of Tarocho Fisheries Cooperative Association

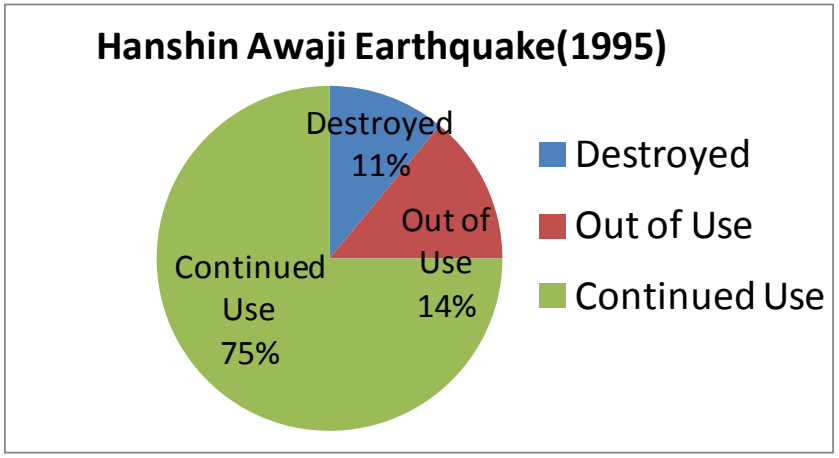


Revised building codes ensured safety

The M9 Earthquake hit Sendai City, but there was no modern building collapse

Office building in Sendai, photo by Satoru Nishikawa, Apr 15 2011





Source: CBRE Consulting "Impact of Great East Japan Earthquake on Japan Real Estate Market"

School Building Retrofitting

Progress of retrofitting of public schools (elementary and junior high schools)	
2002	44.5%
2009	67.0%
2010	73.3%
2012	84.8%

Sendai Framework for Disaster Risk Reduction 2015-2030

Expected outcome over the next 15 years

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.

Goal **7 global targets**

The prevention of new risk and the reduction of existing risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthens resilience.

13 Guiding principles

Priorities for Action

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

Role of Stakeholders

Civil society, volunteers, organized voluntary work organizations and community-based organizations	Academia, scientific and research entities and networks	Business, professional associations and private sector financial institutions, including financial regulators and accounting bodies, as well as philanthropic foundations	Media

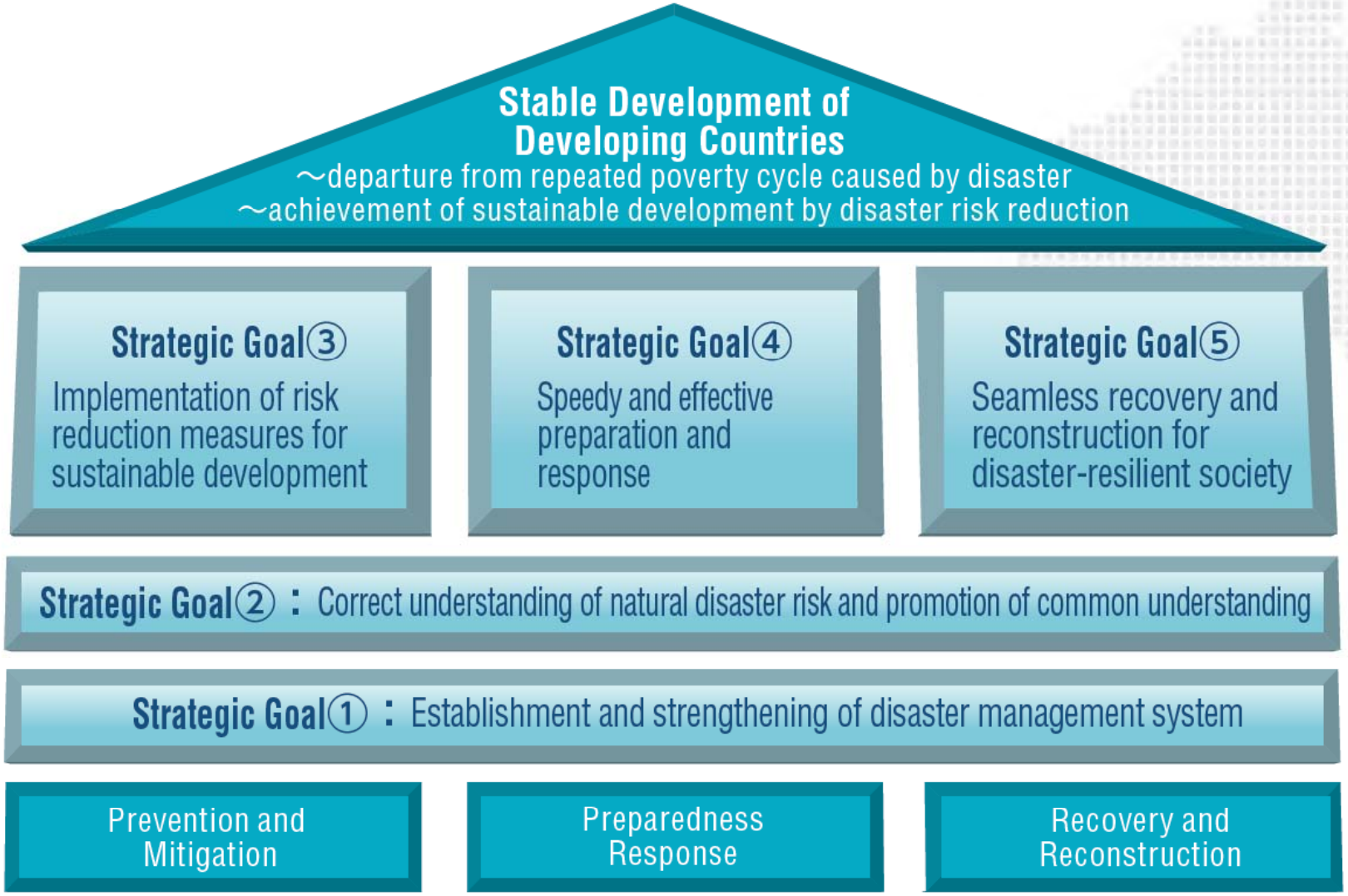
International cooperation and global partnership

Reading the Sendai Framework

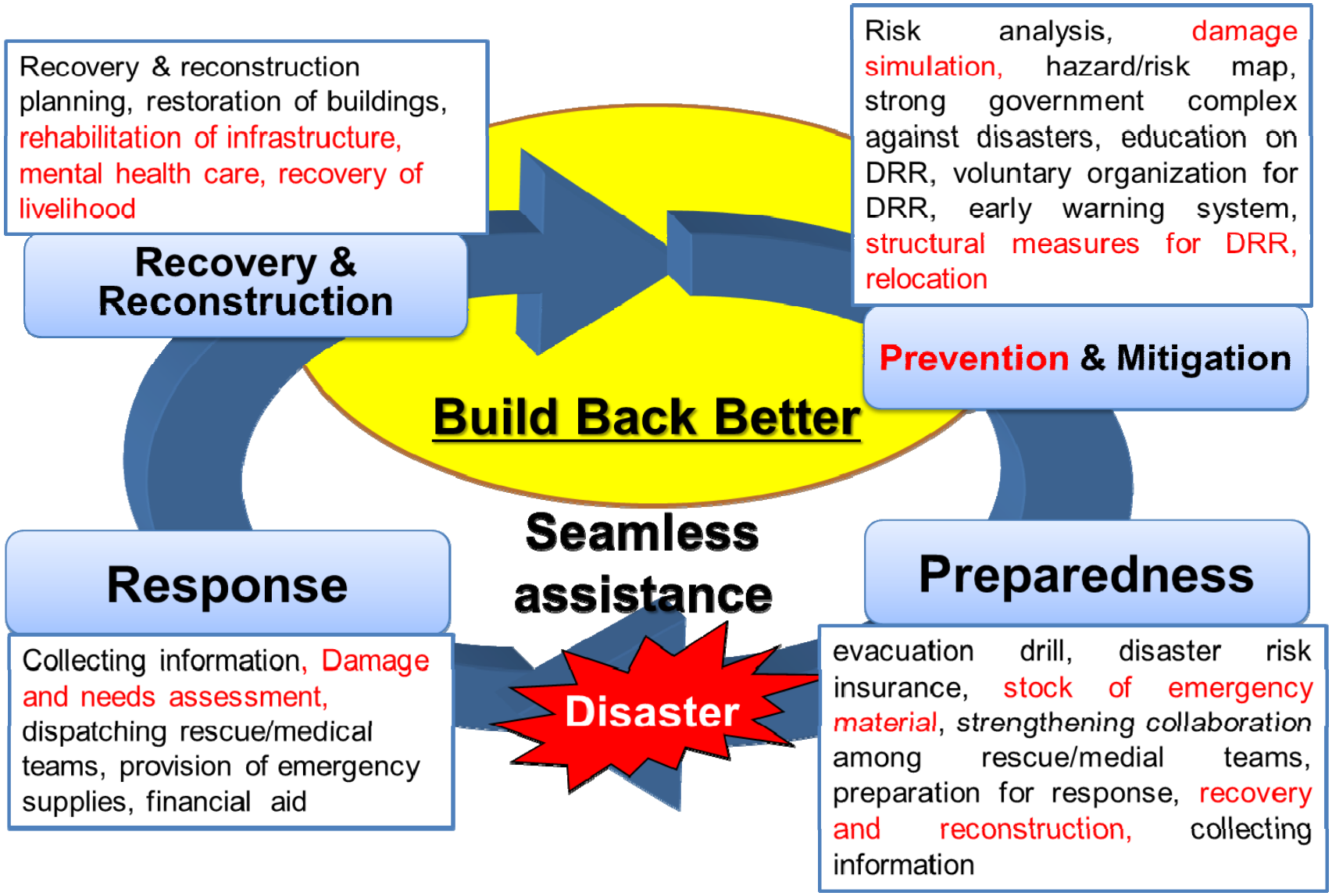
Priorities for action

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

JICA's assistance in Disaster Risk Reduction



JICA assists in Disaster Risk Reduction



“Gapless” Support

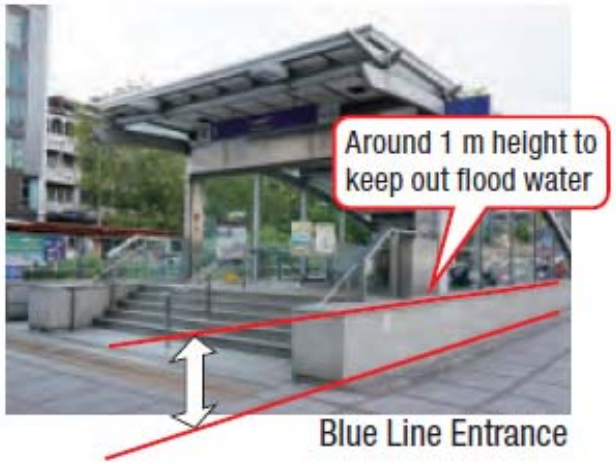
Cyclone Project in Bangladesh

- Multipurpose Cyclone Shelters
- Weather Radars
- Capacity Development of Observation and Forecast
- Community Based DRR Activities

School Building + Shelter

Taking account of DRR in ODA projects

Raising ground level of roads
(Thailand)

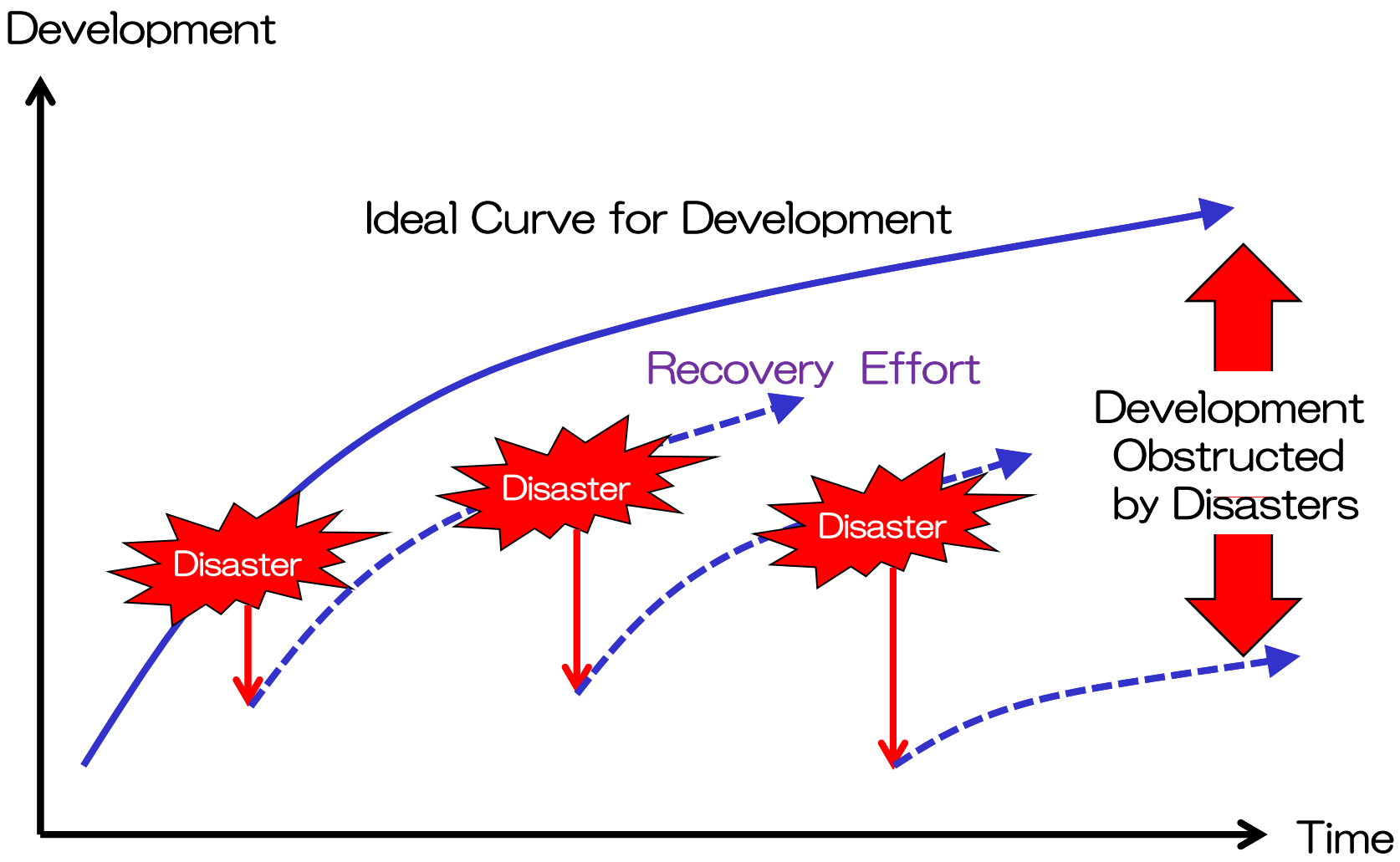


Flood resistant subway
(Thailand)

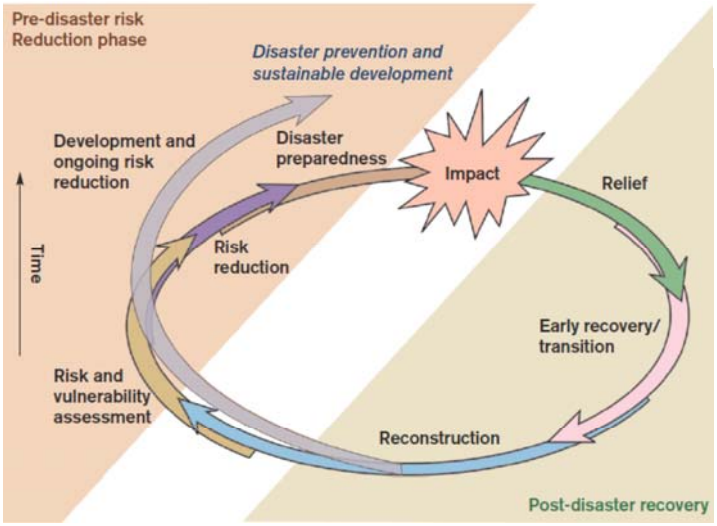
School with shelter function
(Myanmar)

Typhoon resistant hospital
(Philippines)

Development Obstructed by Disasters

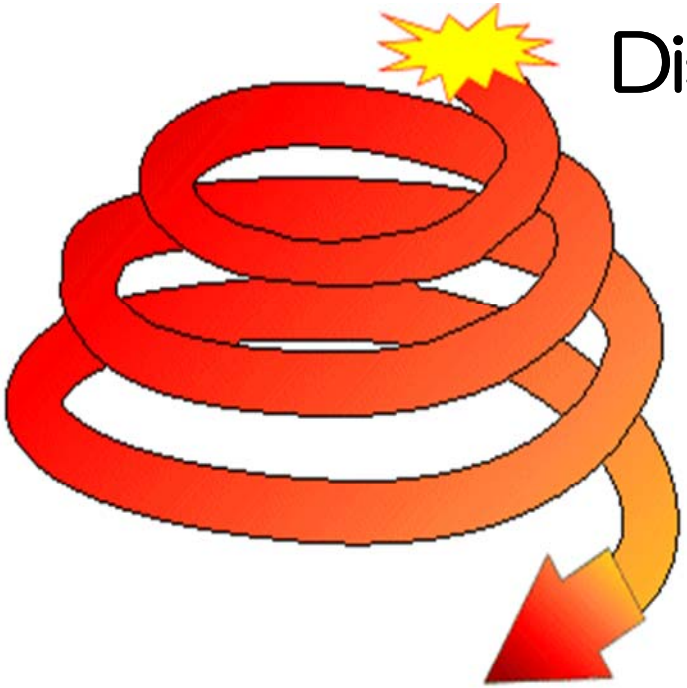


Negative Spiral of Poverty and Disaster



Poverty worsened by

Disaster



-more sever living condition

-being more vulnerable

Preparation for Mega Disasters

- Prior Planning and Investment
- Land use regulation
- Building code and its enforcement
- Risk Information Sharing
- Understanding the meaning of Advisory, and user friendly Early Warning
- Build Back Better for social system