ACP Conference: International Expert Session on
"Future Perspective of Safety Management in Asia"
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Community activities for DRR in Asia and its sustainability

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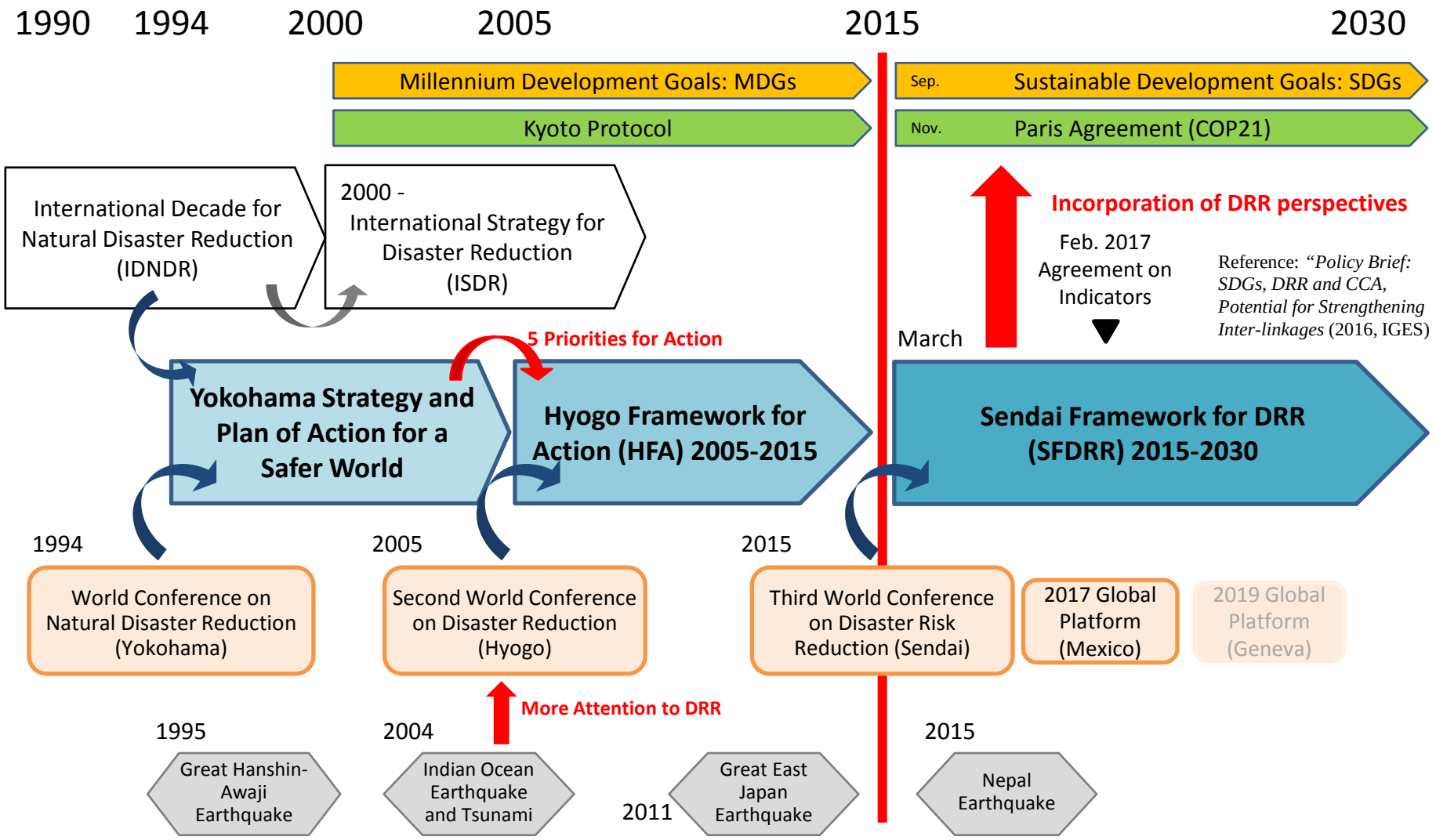
Today's Topics

1. Recognition of Importance of Roles of Community-DRR Activities
2. For Ensuring Sustainabilities of Community-DRR Activities

1. Recognition of Importance of Roles of Community-DRR Activities

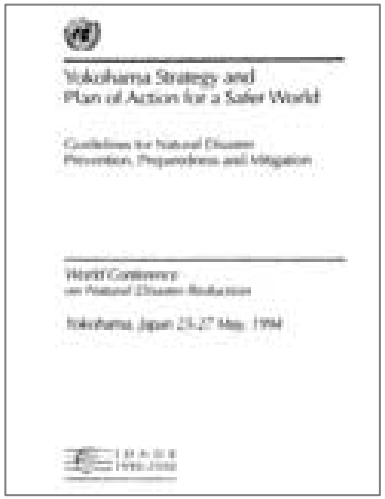
Evolution of Global Framework for Disaster Risk Reduction (DRR)



Yokohama Strategy and Plan for Action

Outline

- Recognition **of importance for taking disaster risk reduction efforts for all the levels from the local community** to the national government
- Development of risk assessment method
- Integration of DRR with the development policy and planning
- Promotion of disaster early warnings and their effective dissemination
- Promotion of cooperation among all sectors, including of media, science-technologies, business enterprise, and NGO
- Promotion of regional cooperation and establishment of regional center for DRR
- Promotion of mobilizing adequate existing resources for the developing countries, particularly the least developed countries etc.



Plan of Action [**Activities at the community** and national levels]

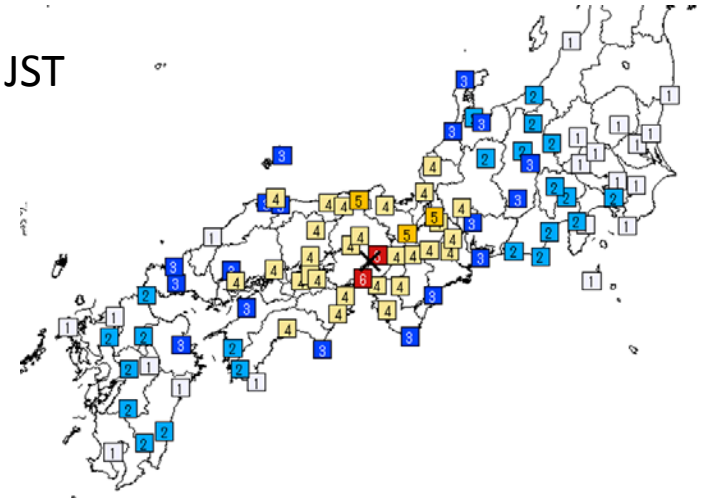
N: Establish and implement educational and information programmes amide at generating general public awareness, with emphasis on policy makers and major groups , in order to ensure support for, and effectiveness of disaster reduction programmes

Disaster Situation – Great Hanshin-Awaji Earthquake (GHAE) in Kobe, Japan

Date and Time: 17 January 1995 (Tue.) at 5:45 a.m. JST
Scale of Earthquake: Magnitude 7.3

People Killed: 6,434

Injured: 43,792



Epicenter and Seismic Intensity Distribution (JMA)

Destroyed houses: 639,686

Fire: 293 cases

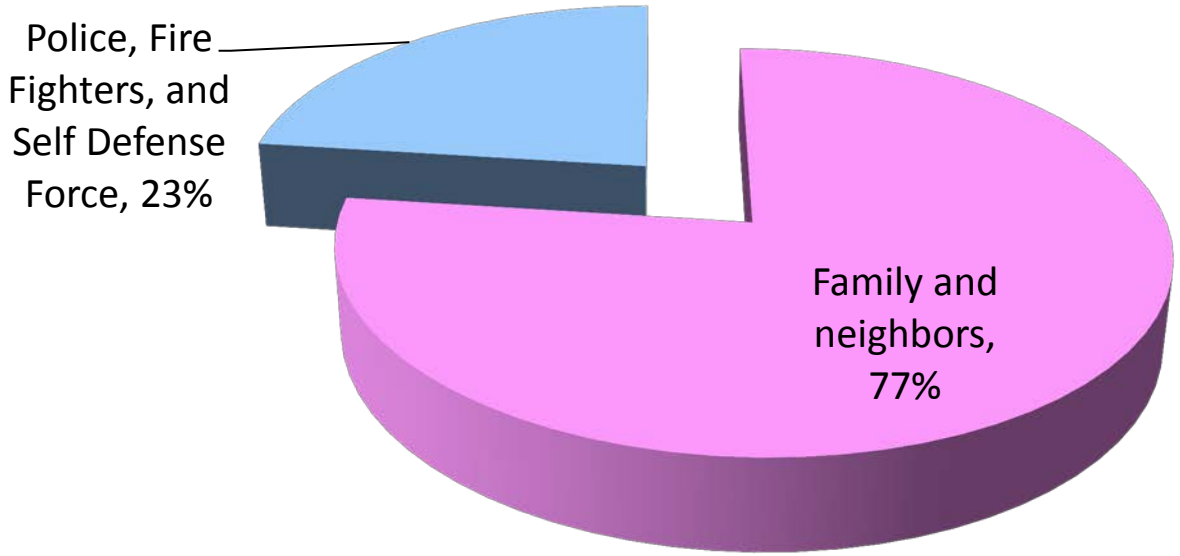
Damaged Roads: 7,245 places

Source: Kobe City, Japan

Important Lesson Learned from GHAE

Mutual Help is Important

77% of the rescued people (approx. 35,000) were saved by families or neighbors in case of Great Hanshin-Awaji EQ (occurred in 1995 in Japan).



[Note]
Public help cannot reach to community soon in case of large scale disasters

Enhancement of mutual help capacities can make big differences for saving people's lives

Important Lesson Learned from GHAE

Build Back Better Town Planning by Community-Initiative

At the time of Disaster






The safety of the town was improved after roads were made wider/ a stream was equipped

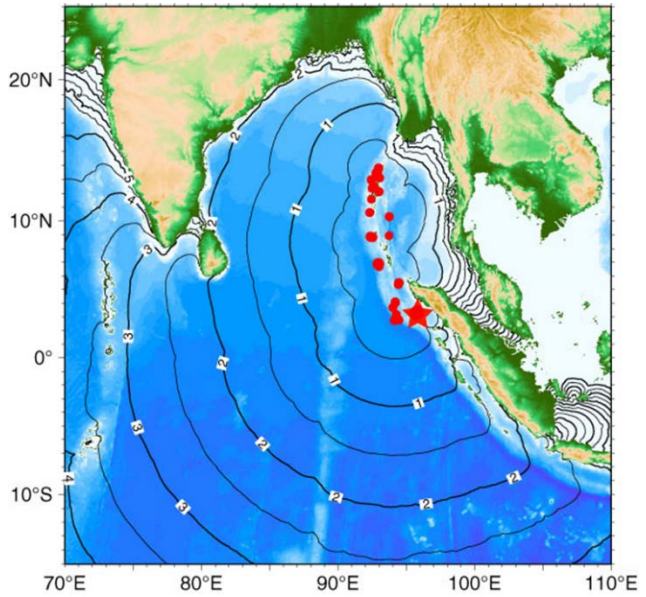
Disaster Situation – Indian Ocean Tsunami

Date and Time: 26 December 2004 (Sun.) at 7:58 a.m. Indonesia Time
Scale of Earthquake: Magnitude 9.3

People Killed: 227,898

Affected People: 2.5 million

Destroyed houses: more than 1 mil.



Epicenter and Tsunami Propagation


Indonesia


Thailand


Sri Lanka

Source: ADRC

Important Lesson Learned from Indian Ocean Tsunami

Importance of Transfer of Lessons

- **Traditional song delivered from generation to generation saved people's lives**

Lyric/ song to inform about importance of early evacuation to the higher place immediately after a big earthquake based on the past tragedy by Tsunami in 1907

- most of people immediately evacuated
- only 7 were killed (among 78,000 residents)

The SMONG Story

Hear you all this story
Once upon a time
A place gone under the sea
This is what happened

Find there would be a quake
And then a wall of water
A village goes under water
In a flash

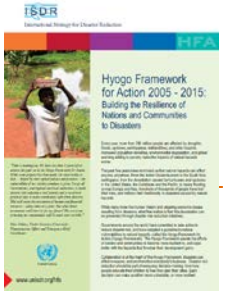
So, when the land shakes
Run you all, run
Find places that are high

SMONG that is
Told by our great old ones
Remember this and be aware
Hear you, message from elders before us

SMONG is your bath water
Quake is your gentle swaying lullaby
Thunder is your tambourines
And lighting is your sparkling light
(Let's overcome together!)

Hyogo Framework for Action（HFA)

Hyogo Framework for Action 2005 - 2015:
Building the Resilience of Nations and Communities to Disasters



3 Strategic Goals

1. The integration of disaster risk reduction into sustainable development policies and planning
2. Development and strengthening of institutions, mechanisms and capacities to build resilience to hazards
3. The systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes

5 Priorities for Action

1. Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.
2. Identify, assess and monitor disaster risks and enhance early warning.
3. Use knowledge, innovation and education to build a culture of safety and resilience **at all levels**.
4. Reduce the underlying risk factors.
5. Strengthen disaster preparedness for effective response **at all levels**.

Implementation and Follow-up

(States, Regional Organizations, International Organizations, ISDR Systems)

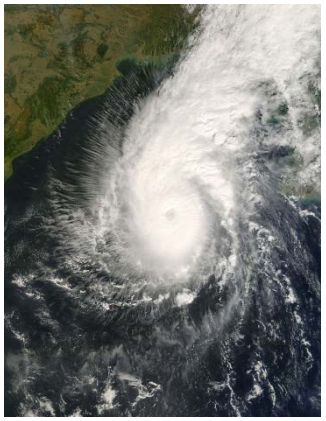
Disaster Situation – Cyclone Sidr in Bangladesh

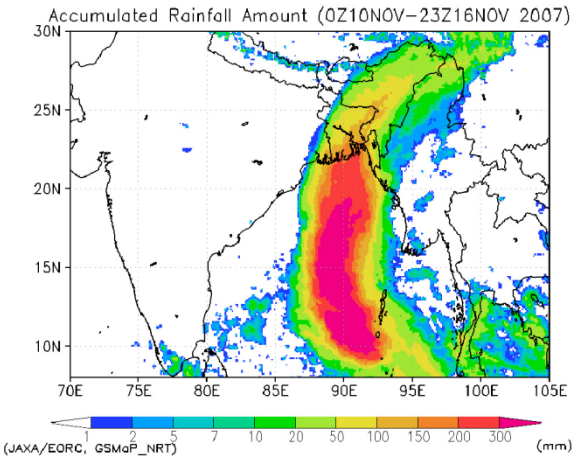
Date and Time: 15 November 2007 (Thu.) at midnight
Scale of Cyclone: 944hPa (minimum)

People Killed: 3,347

Injured People: 55,282

Affected People: 8.9 million





Totally Destroyed Houses: 563,877

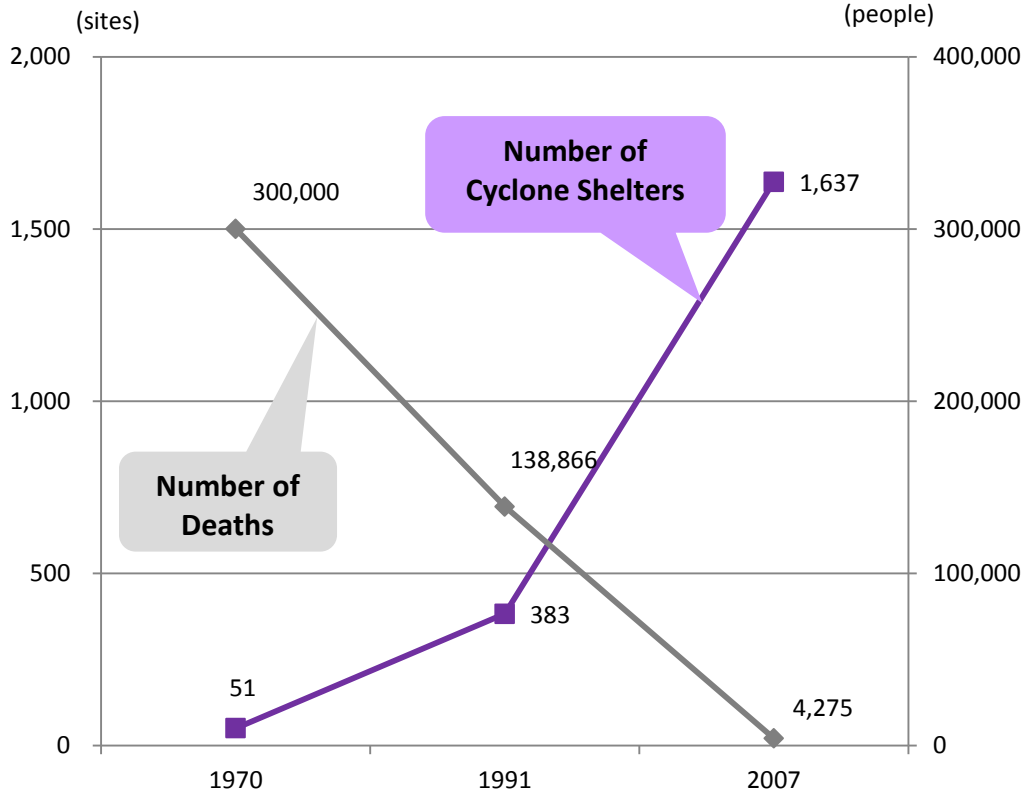
Partially Destroyed Houses: 955,065

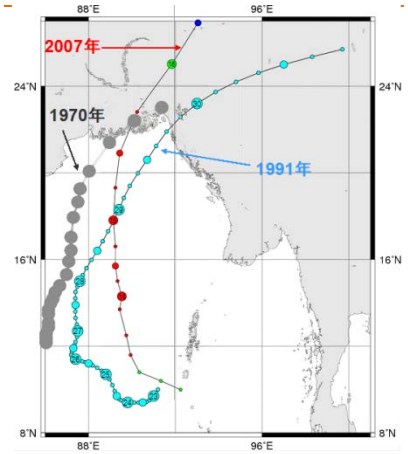
Totally Damaged Educational Institutions: 4,231

Build Back Better

to build more resilient communities throughout the reconstruction phase following a disaster

Trend in Cyclone Shelters Construction and Cyclone Victims in Bangladesh





Cyclone Shelters + Good Community-based Early Warning System

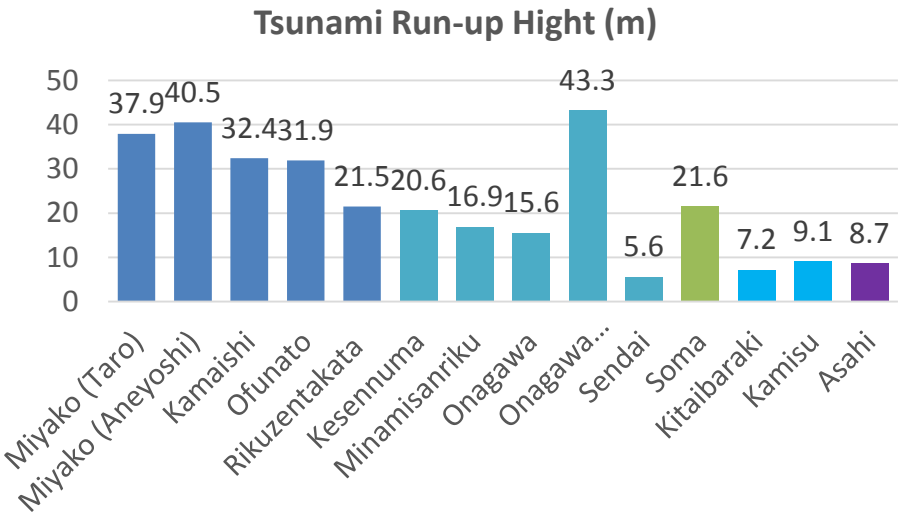
Source: "JICA's Cooperation on Disaster Management Toward Mainstreaming Disaster Risk Reduction - Building Disaster Resilience Societies-", March 2015, Japan International Cooperation Agency (JICA)

Disaster Situation – Great East Japan Earthquake (GEJE)

Date and Time: 11 March 2011, 14:46 JST
Scale of Earthquake: Magnitude 9.0 (largest in Japan's history)
Highest Height of Tsunami (Measured at Tidal Observatories):
Souma City, Fukushima : above 9.3 m

People Killed: 19,667

Injured: 6,231



Totally/Half Destroyed Houses: 402,748

Partially Destroyed Houses: approx. 745,162

Cost of Damage: 169 billion

Source: Cabinet Office, Japan

Important Lesson Learned from GEJE

Importance of Transfer of Lessons/ Practices on DRM are Crucial

- **Information by Old Generation Saved People's Lives**

Stone Monument on Past Tsunami in 1986 & 1933 at Aneyoshi District

Tsunami in 2011 came to only 50 m below this point

Stone monument delivers message not to build houses below this point based on the past experience of large Tsunami

- all the houses in this district built above this point
- No damage to the houses in this district

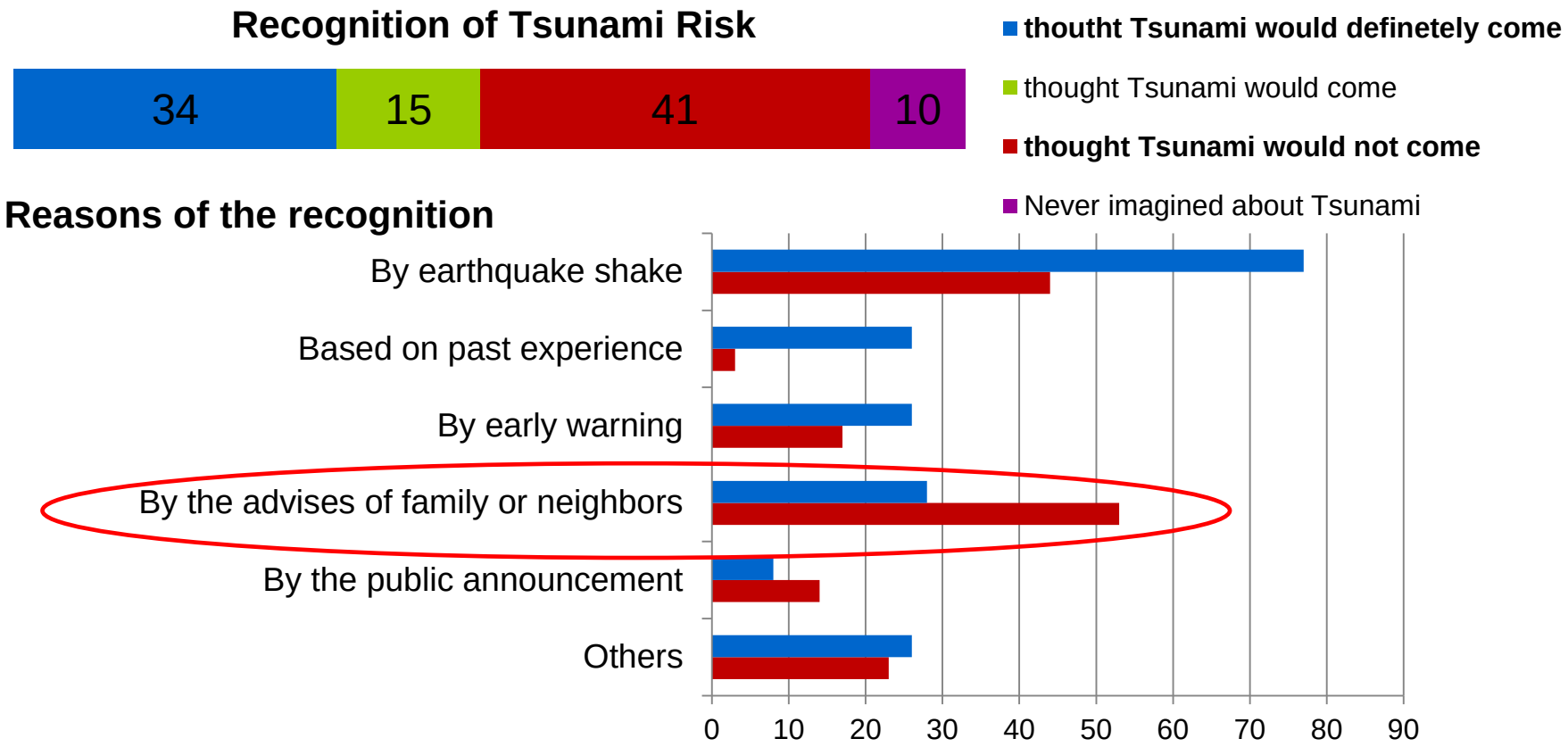
- **Collaboration of School and Communities Led to Appropriate Evacuation Actions**

Many Tsunami DRM activities had been done in schools in Kamaishi city since 2004.
-> Leading evacuation activities of junior high school students saved themselves as well as the residents around their areas
-> No students were killed in all 14 schools in the city (exclude those who stayed in their home for sick, etc. on the day)

Important Lesson Learned from GEJE

Underestimated Risk Recognition

Survey to the Persons Who Immediately Evacuated (Great East Japan EQ)

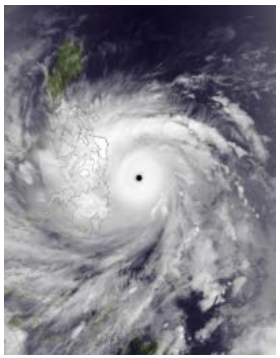


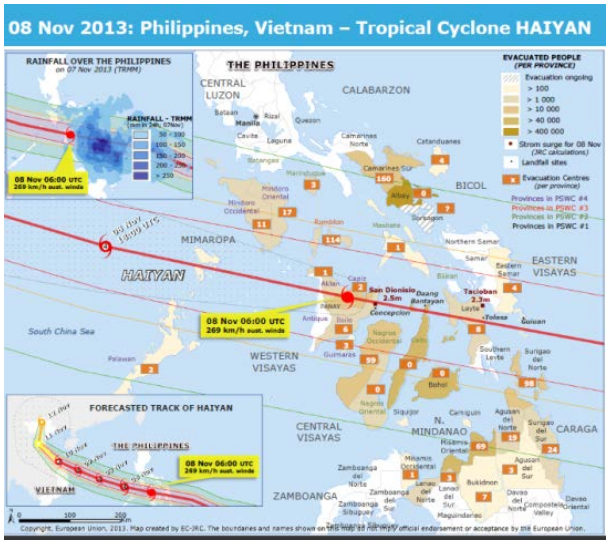
Even those who thought Tsunami would not come immediately evacuated by the advises of family or neighbors

Source: "Analysis of Interview Survey on Evacuation Action in the case of East Japan Earthquake and Tsunami in 2011", Central DM Committee

Disaster Situation – Typhoon Haiyan in the Philippines

Date: 8 November 2013 (Fri.)
Highest Wind Speed (10min sustained)**:** 230 km/h
Highest Wind Speed (1 min sustained)**:** 315 km/h
Lowest Pressure: 895 hPa





Typhoon Track and Rainfall and Wind Situation

People Killed: 6,300

Injured: 28,689

Affected: 16,078,181

Damaged houses: 1,084,762

Cost of Damage: Total US$2,053 million
(damage to infrastructure, school & medical facilities, agriculture and fishery sectors, industries, and trade & tourism

Source: NDRRMC, Philippines (http://www.ndrrmc.gov.ph/attachments/article/1329/FINAL_REPORT_re_Effects_of_Typhoon_YOLANDA_HAIYAN_06-09NOV2013.pdf)

Important Lesson Learned from Typhoon Haiyan

Community's Regular Practices on DRM are Crucial

The Case of San Francisco, Cebu Province in Typhoon Haiyan

Years of work to strengthen community preparedness and reduce disaster risk made awareness level of the community very high

->Prompt evacuation of 1,000 people from a tiny island, Tulang Diyot that had all 500 houses destroyed by Typhoon Haiyan saved the entire population

*San Francisco was selected as one of Champions of the UN Office for Disaster Risk Reduction's Making Cities Resilient Campaign

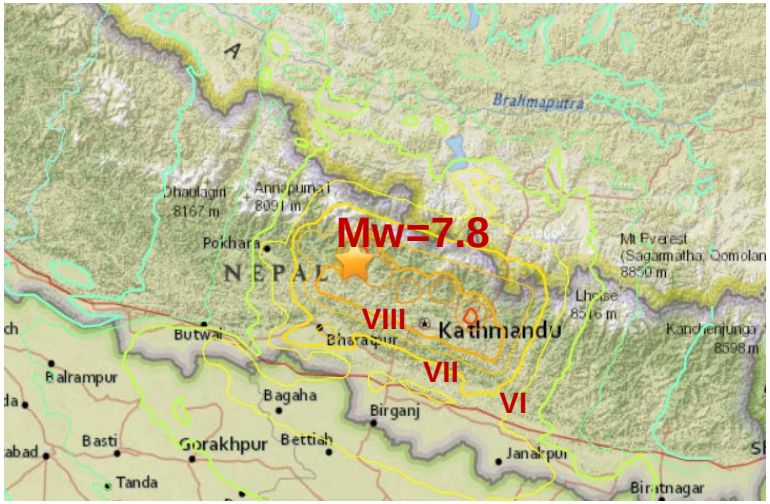
Source: UNISDR (http://www.unisdr.org/archive/35524)

Disaster Situation - Gorkha Earthquake in Nepal

Date and Time: 25 April 2015 (Sat.) at 11:56 a.m. NST
Scale of Earthquake: Magnitude 7.6

People Killed: 8,790

Injured: more than 22,300



Magnitude and Seismic Intensity Distribution (USGS)
(Moment Magnitude, Mercalli intensity scale)

Destroyed houses: at least 498,852

Destroyed gov't bldgs.: 2,656

Destroyed school classrooms: 19,000

Source: Nepal Government (https://reliefweb.int/sites/reliefweb.int/files/resources/PDRF%20Report_FINAL10May.pdf)

Important Lesson Learned from Gorkha Earthquake

Community's Good Understanding of Safe Building

Awareness Program for Communities

Pull-down Test

Shaking-table Demonstration

No Damages

Severe Damages

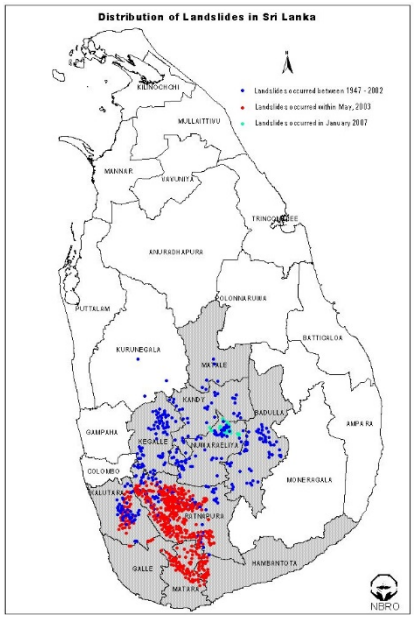
Disaster Situation – Flood and Landslide triggered by Cyclone in Sri Lanka in 2003

Date: 17 May 2003 (Sat.)
Rainfall amount in 18 hours: 366.1mm

People Killed: 250

Affected People: 146,000

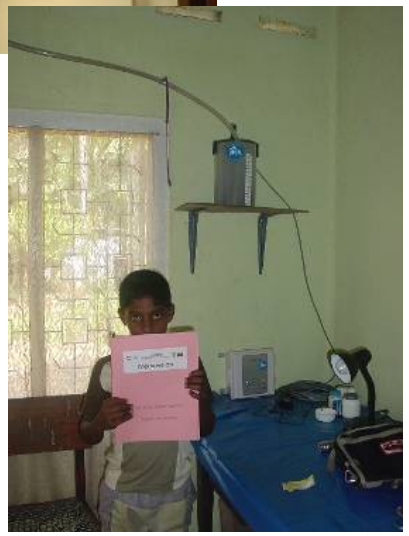
Destroyed houses:
at least 24,750



Source: NBRO, Sri Lanka

Local Information is a Key for DRR

Signs of Localized disasters, such as landslides can be monitored effectively in cooperation with communities and lead to early evacuation



Why Community-based DRR (CBDRR) activities are required?

Community members are the **first responder of disasters**. Initial response at the first stage sometimes determines results of disasters	• Need **proper knowledge** on risks and actions to be taken in case of disasters for the community member
Mutual help can make big differences in the result of disasters	• Need **pre-coordination and preparation** among community members and with other stakeholder
Local knowledge is indispensable for the effective disaster risk management including policy planning	• Need **involvement** community members **in** the DRRM **planning**
Initiatives of community people have an impact on prompt recovery from damages and making community resilient to future disasters	• Need enhancing **community's awareness** for the importance of their own initiatives

2. For Ensuring Sustainability of Community DRR Activities

Know Own Risks: Town Watching for DRR

Hazard, Vulnerability, Capacity (HVC) Assessment

1

Field Survey

2

Risk Mapping

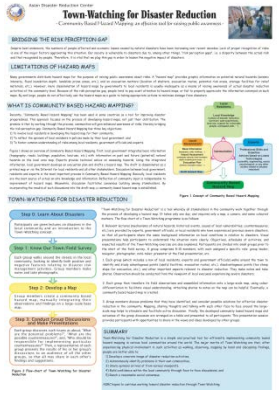
3

Disaster Management Planning

4

Making Action Plans

5



Photos: JICA Project for Enhancement of the Disaster Management Capacity of BNPB and BPBD in Indonesia

Community DRR Mapping

Listening Local Information

Confirmation of Risk Situation by themselves

Sharing Risk Information among Participants

Mapping of the Findings through the Town Watching

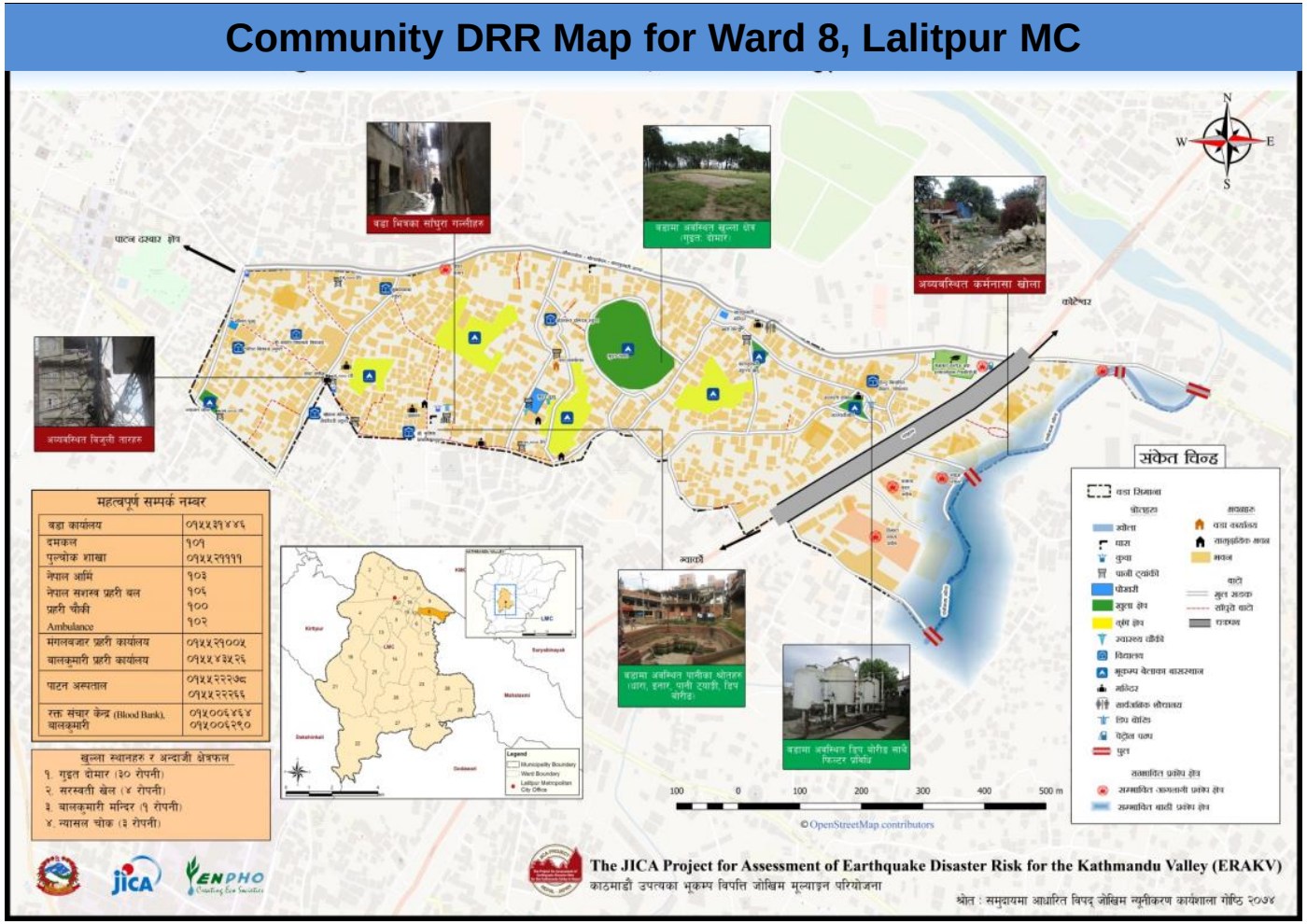
Confirmation of the Community's Capacity, such as Open Space

Discussion on the Issues and Challenges for DRRM

Source: JICA Project for Assessment of Earthquake Disaster Risk for the Kathmandu Valley in Nepal

Activities for Enhancing Community DRR Capacities

Result of the DRR Mapping Activities

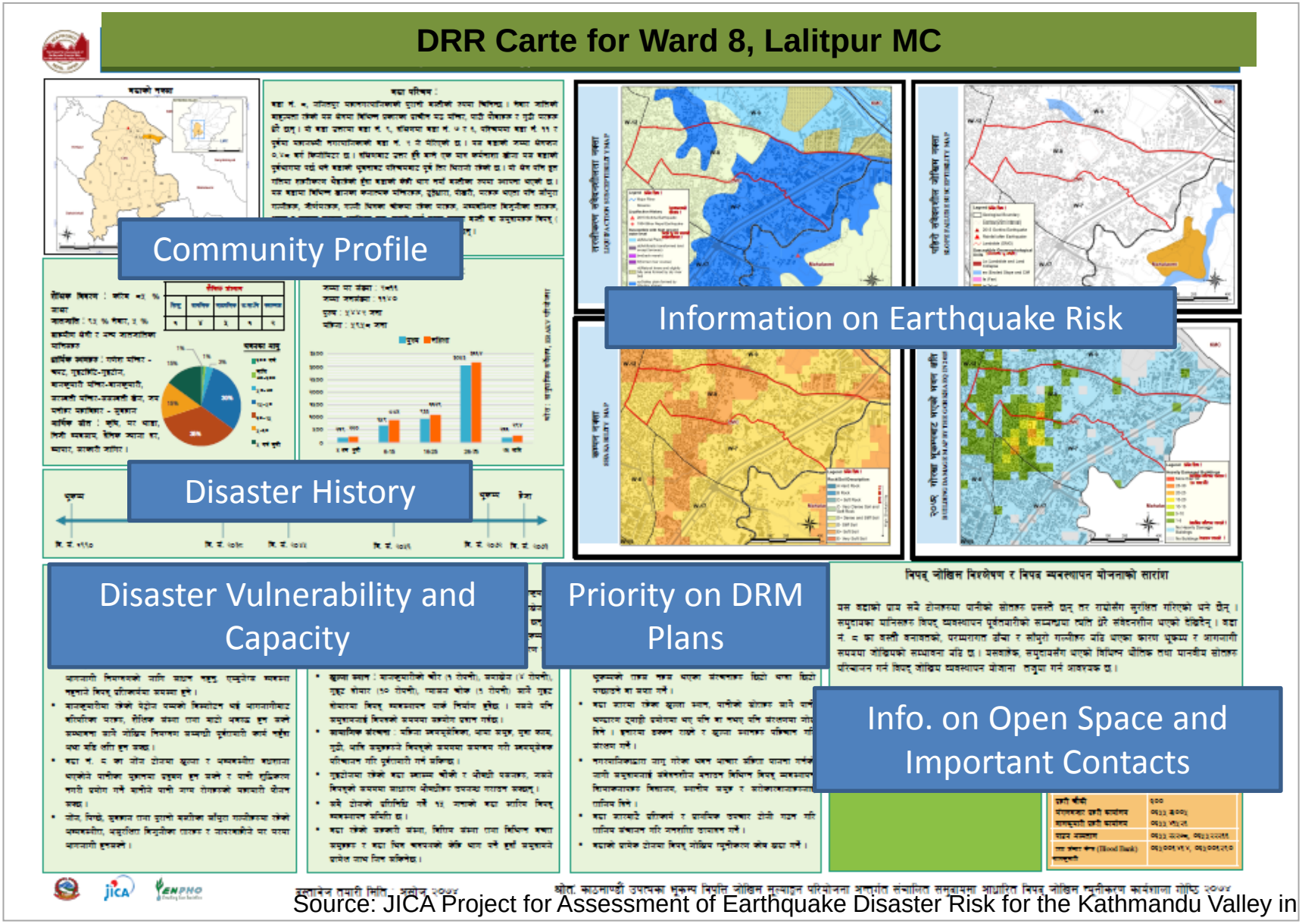


Information in the Map: Risk Areas with Pictures, Community's Capacity (Open Spaces, Water Supply, Ward Office, Hospital, etc.), Contact Information, etc.

Source: JICA Project for Assessment of Earthquake Disaster Risk for the Kathmandu Valley in Nepal

Activities for Enhancing Community DRR Capacities

Making Community's Profile on DRR

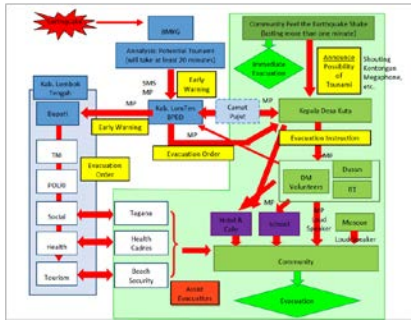


Source: JICA Project for Assessment of Earthquake Disaster Risk for the Kathmandu Valley in Nepal

Activities for Enhancing Community DRR Capacities

DRM Drill for Verifying the Community DRR Plan

List of Actions



Information Flow

Evacuation with Making Early Warning

Desa Head: Coordination with BPBD

Medical Care and Support

Final Check of the Area

Head Counting

Reporting (Desa -> Kab. BPBD -> Prov. BPBD)

Food Preparation

Fun Program for Children

Shelter Management

Reporting from DM Volunteer to Desa Head

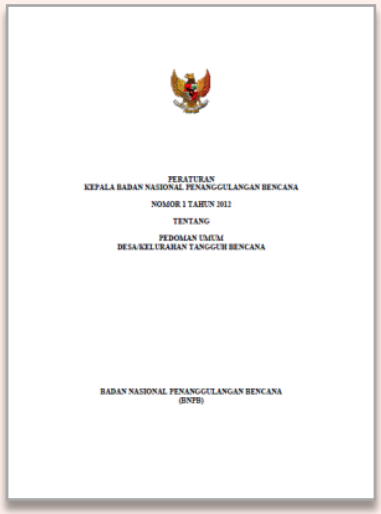
DM Volunteer Evaluation Meeting

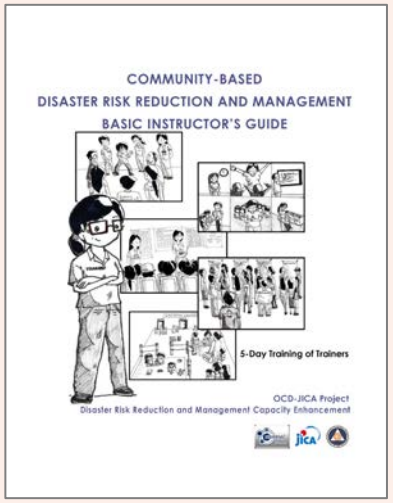
Actions by Communities during the Evacuation Exercise

Reference: JICA Project for Enhancement of the Disaster Management Capacity of BNPB and BPBD in Indonesia

Various Initiative for Promoting CBDRRM Activities

Indonesia	Philippines	Japan
• Enactment of Head of BNPB Regulation 2012-No.1 on General Guidelines “Disaster Resilient Village” • Implementation of the program based on Technical Guidelines of “Disaster Resilient Village” each year	Development of Standardized CBDRRM Basic Instructor’s Guide (BIG) by the Discussion among Major Stakeholders of the Activities in 2013	Development of Guideline for Community DRR/DRM Planning in 2014





Disaster Situation – Heavy Rain in July 2018 in Japan

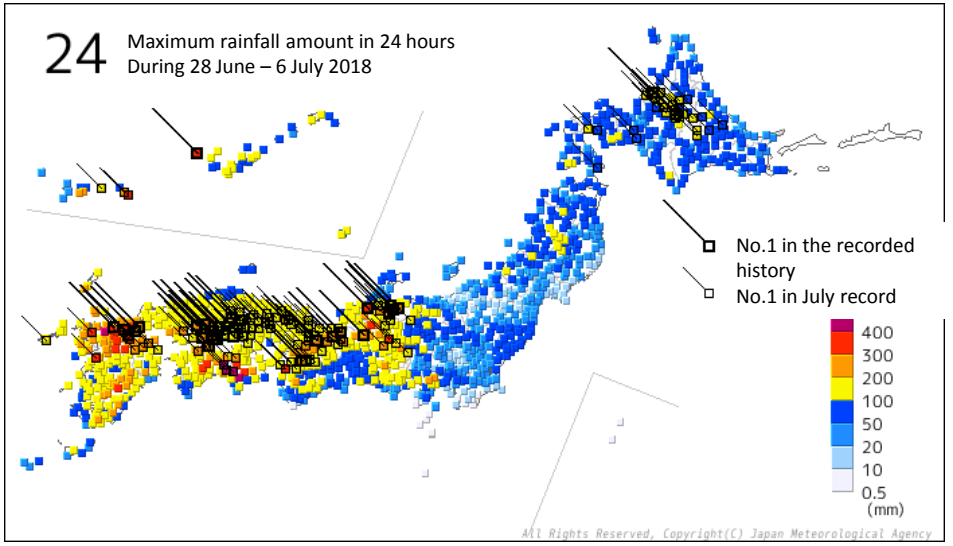
Date and Time: 28 June – 8 July 2018

Total Rainfall Amount :

Umajimura (Kochi): 1,544mm
Motosu-city (Gifu): 967mm
Saga-city (Saga): 902.5mm

People Killed: 237

Injured: 467



Maximum rainfall amount during 28 June – 6 July (Source: JMA)

Totally/Half Destroyed houses: 18,015

Inundated houses: approx. 28,500

landslides: 2,581 places

Source: Cabinet Office (http://www.bousai.go.jp/updates/h30typhoon7/pdf/310109_1700_h30typhoon7_01.pdf) / FDMA (http://www.fdma.go.jp/bn/754e700075402585c9c171d177852c695d5d9d4a.pdf)

Message by the Official Working Group on evacuation from flood and landslide disasters based on the lessons learned from 2018 July Heavy Rain in Japan

Address to Nation - Before the important life is lost -

- Natural disasters are everyone's business. They are concerns of the life of "you" and "your family"
- It is impossible for the administration to issue evacuation information according to the situation of each individual.
- Administration is not a versatile one. Please do not leave your life to the administration.
- Judgement whether to evacuate or not is "Your" judgment. Please protect your life by yourself.
- However, "You" are not alone. Let's help each other in the area. The government will also support you and the community with full power.

4 Priorities for Action in the SFDRR

4 PRIORITIES FOR ACTION

Priority 1 **Understanding disaster risk**

Policies and practices for DRR should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment.

Priority 2 **Strengthening disaster risk governance to manage disaster risk**

Disaster risk governance at the national, regional and global levels is of great importance for an effective and efficient management of disaster risk.

Priority 3 **Investing in disaster risk reduction for resilience**

Public and private investment in DRR are essential to enhance the economic, social, health & cultural resilience of persons, communities, countries, their assets, as well as environment

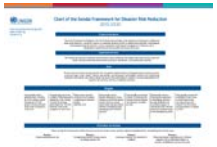
Priority 4 **Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction**

Strengthened disaster preparedness for response, recovery, rehabilitation and reconstruction are critical to build back better

National and local dimensions

Regional and global dimensions

Source: UNISDR



CBDRRM Activities for Promotion of Implementation of the SFDRR (Sendai Framework for DRR)

Priority 1: Understanding Disaster Risk

- Build the knowledge of communities by using existing training mechanisms
- Use local knowledge and practices in disaster risk assessment and policy planning and implementation.
- Promote national strategies to strengthen public awareness in DRR
- Enhance collaboration to disseminate disaster risk information through the involvement of community-based organizations.

Priority 2: Disaster Risk Governance

- Assign clear roles to community representatives in the decision-making process for DRRM
- Empower local authorities through financial means to work and coordinate with communities in DRRM at the local level

Priority 4: Enhancing Disaster Preparedness for Effective Response and to BBB

- Establish community centers for the promotion of public awareness and the stockpiling of necessary materials

Source: UNISDR

Thank you for your attention!