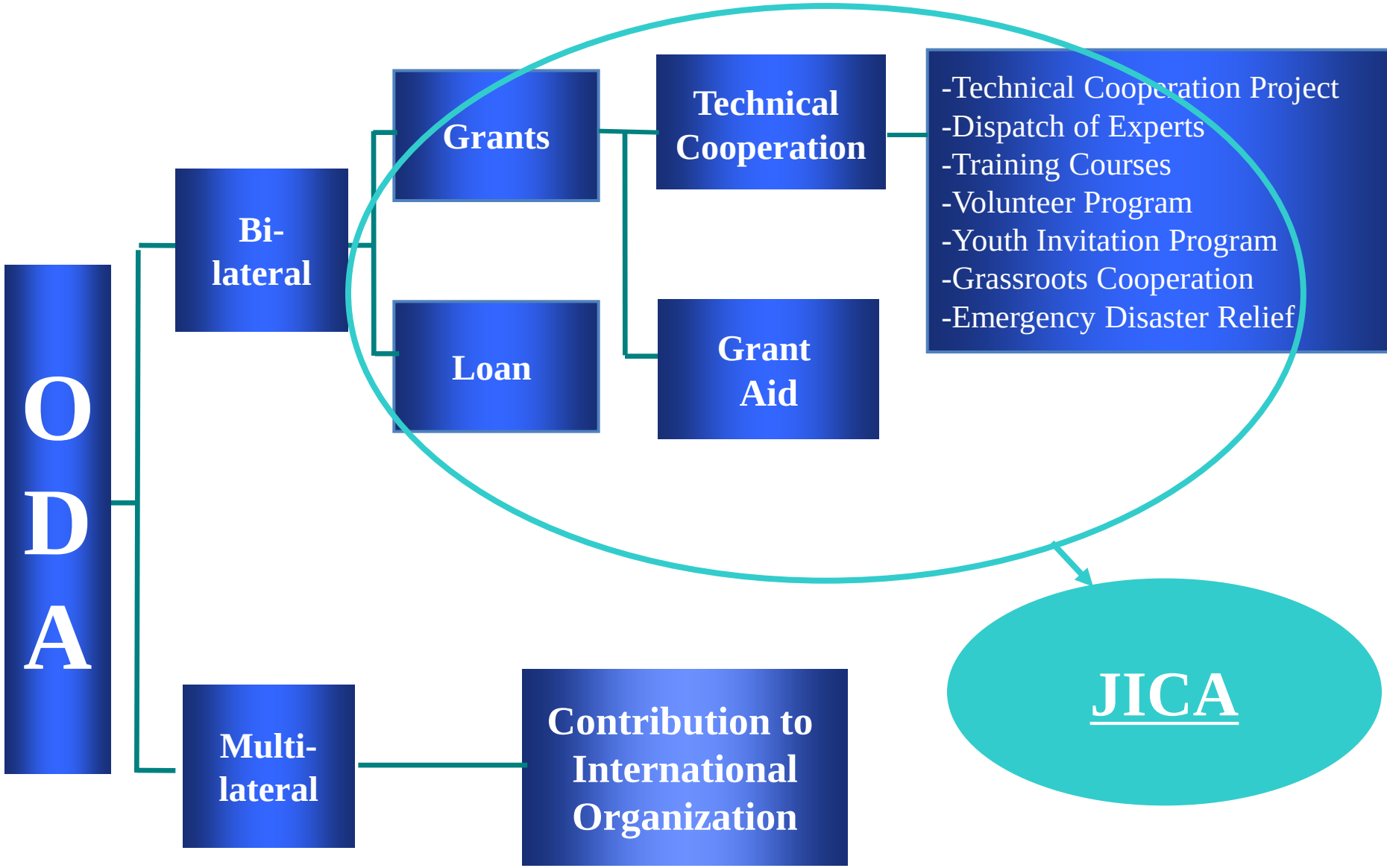
# Eco-Disaster Risk Reduction Practices by Japan International Cooperation Agency (JICA)

**Koji MITOMORI**
Natural Environment Team 1,
Global Environment Department,
Japan International Cooperation Agency (JICA)

# JICA's Role in Official Development Assistance



# JICA in Disaster Risk Reduction

## Investment for DRR

**Build Back Better:**

- Reconstruction for resilient society

**Mainstreaming DRR:**

- Contributing in discussions on mainstreaming DRR in international arena
- Conducting Disaster Risk Assessment in all projects

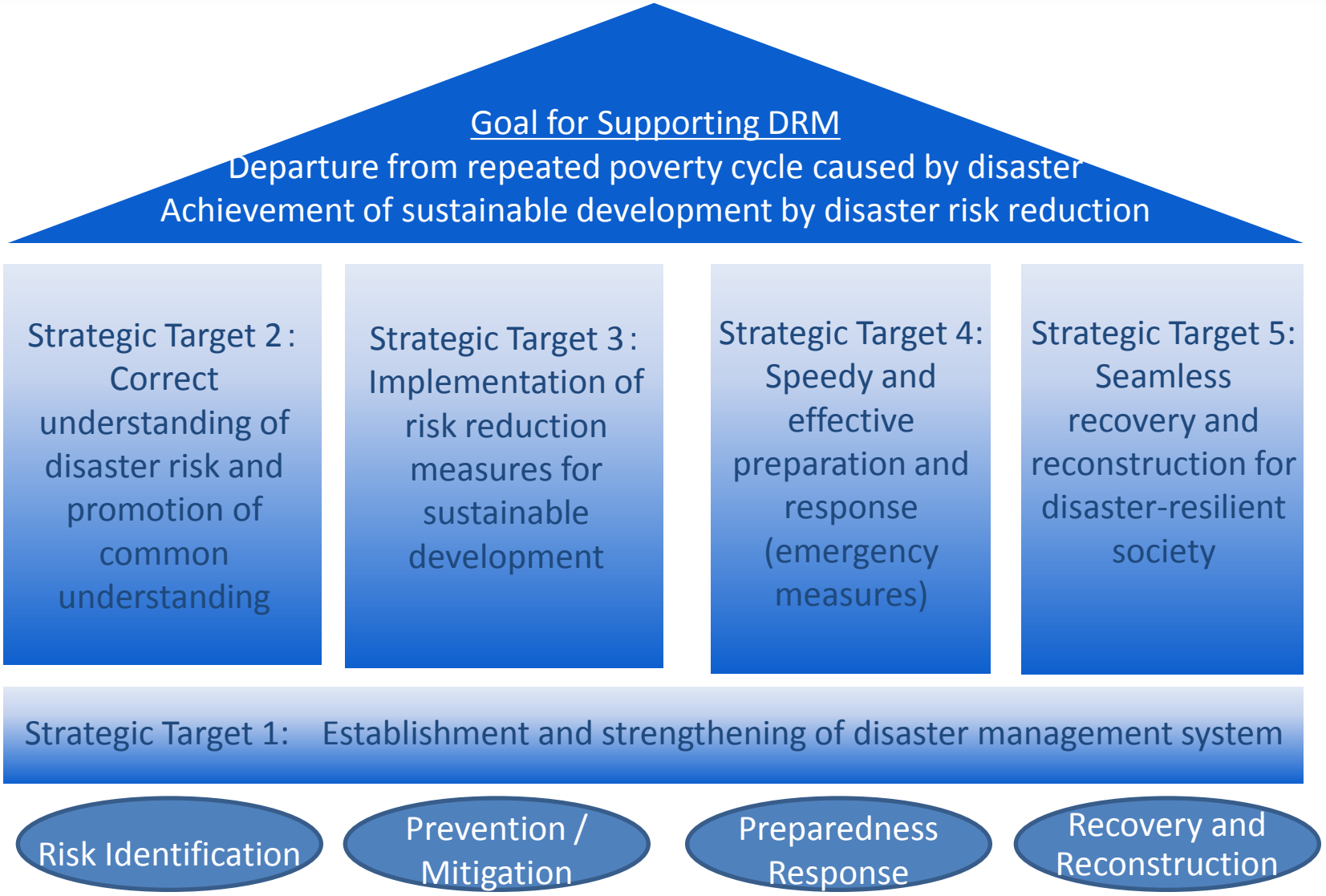
**Seamless Approach:**

- Linking emergency assistance and development
- Comprehensive cooperation: Effective combination of structural and non-structural measures, approaching all layers, multi-sector.

**Response for New Needs:**

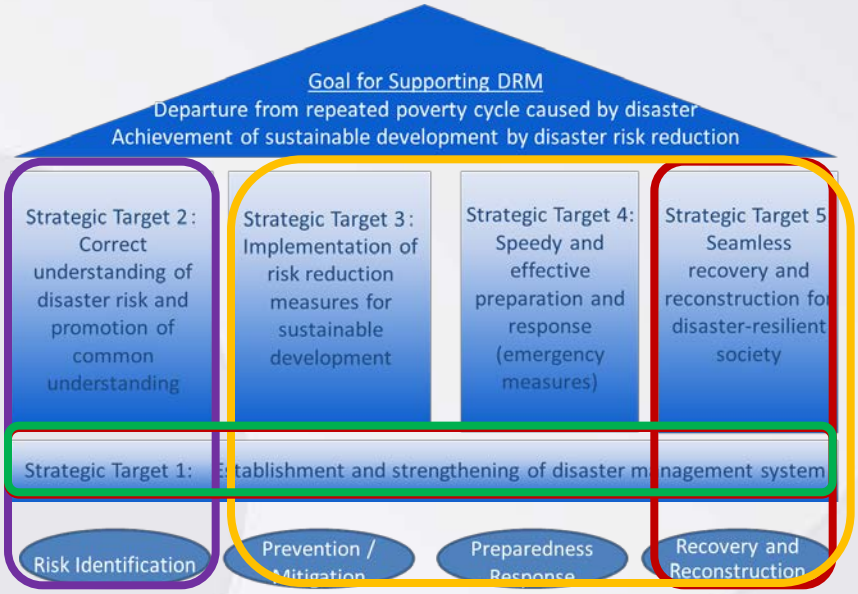
- Stand-by Emergency Credit for Urgent Recovery
- Area Business Continuity Plan (BCP) and Area Business Continuity Management (BCM)

# JICA's Development Strategic Goals focusing on Disaster Risk Reduction



# Examples of Eco-DRR Projects

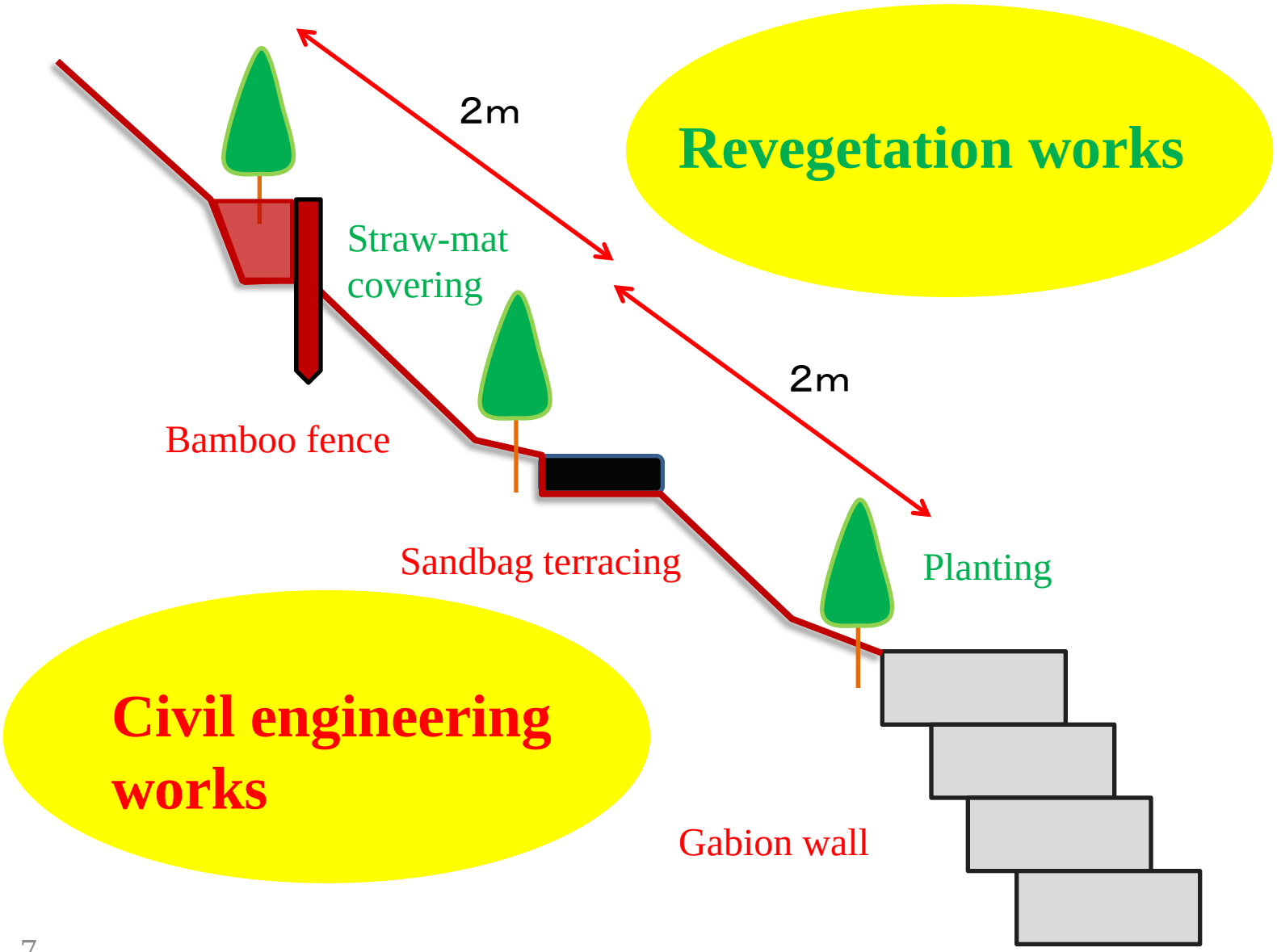
- **Forest Restoration after the Earthquake in Sichuan Province (China)**
- **Mangrove Rehabilitation for Enhancement of Cyclone Disaster Prevention in Ayeyawady Delta (Myanmar)**
- **Sustainable Management of Coral Reef and Island Ecosystems (Philippines)**
- **South-south cooperation to disseminate Watershed Forest Management (Chile & Panama)**



# Project on Forest Restoration after the Earthquake in Sichuan Province 2010-2015

- Supporting China's Ecosystem Restoration Program
- Focusing on reforestation of collapsed hill side
- Introducing "*chisan* " type of stabilization and revegetation work techniques, which has been evolved among Japanese foresters and new to Chinese counterparts

# Forest Restoration Technology



# Implementation of Restoration

# Build Back Better & Establishment of Management System

- Recovering forest ecosystem with enough investment
- Improving livelihood of local people by planting multipurpose trees (i.e. walnut trees)
- Strengthening resilience of the local community by involving them into the restoration works
- Introducing "*chisan*" as a national program based on the results of the Project

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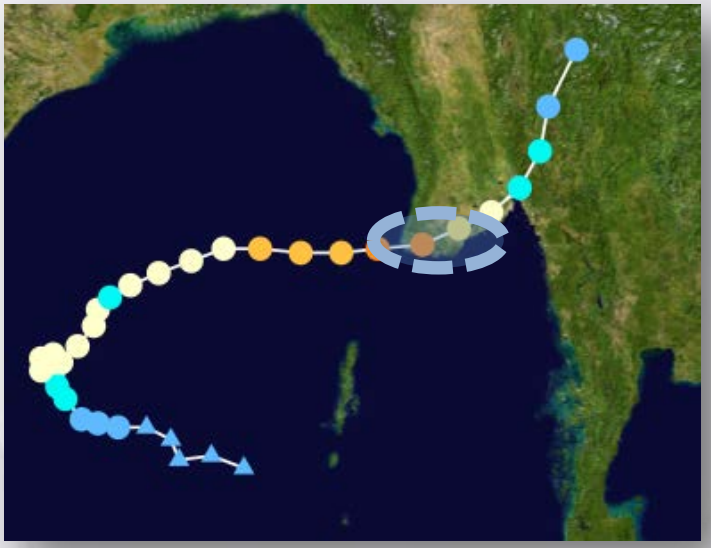
# Case 2: Myanmar- Cyclone Nargis

## Project on Integrated Mangrove Rehabilitation and Management through Community Participation in the Ayeyawady Delta 2007-2013



Cyclone Nargis:
- Lowest pressure: 962 mbar
- Highest winds-1-minute sustained: 215 km/h (135 mph)

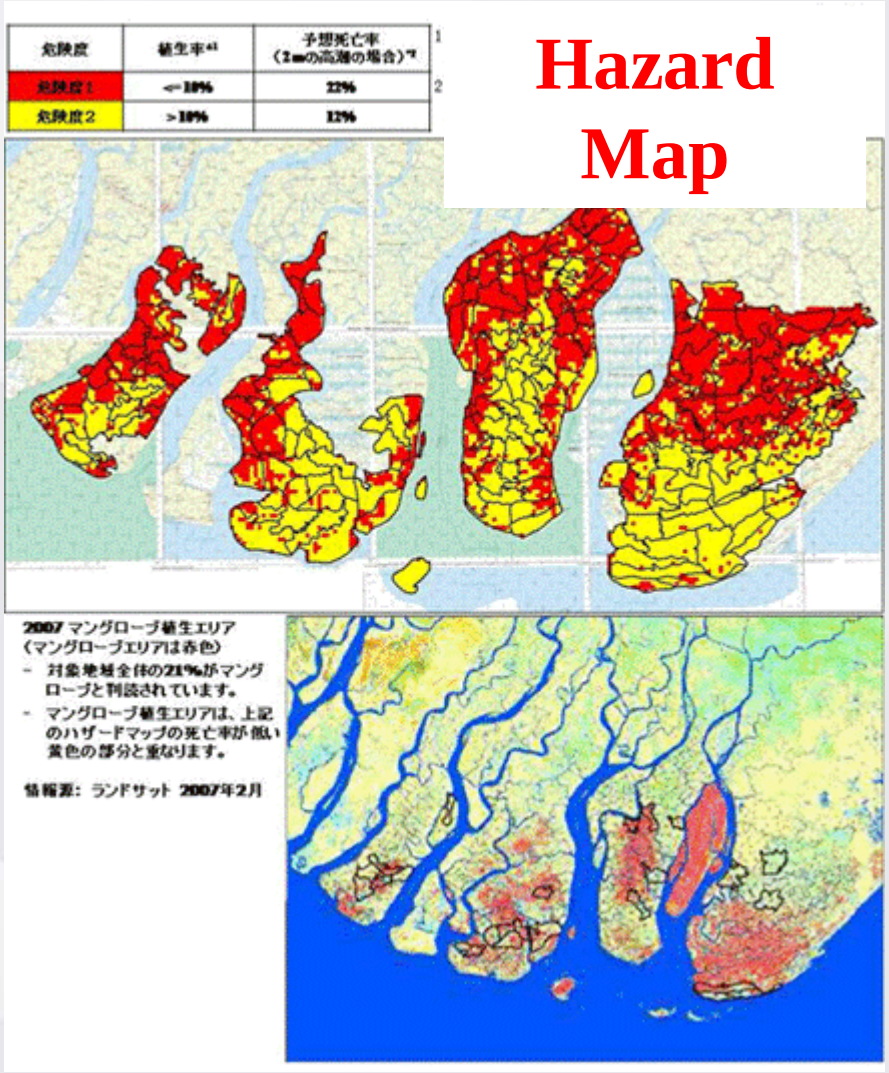
Damages:
-130,000 People perished

-Most damaged Area :
**The Ayeyarwady Delta**
→ Storm surge (3-5 m high) swept throughout deltas

# Seamless Approach for Post-disaster Recovery

Project Scope was expanded for rehabilitation from damages caused by 2008 Cyclone Nargys:

- Damage & recovery survey on the communities
- New hazard map based on the satellite images
- CF extension & nursery centers rehabilitated with reinforcement
- Distribution of recovery materials and seedlings
- Recovery survey of mangrove vegetation



# Build Back Better by Rehabilitation of Mangrove Forests

Mangrove Reforestation (Jul, 2009)

View of Mangrove Nursery Bed Area (Jul, 2010)

JICA Grant Aid Assistance (2012-2017)

- Mangrove afforestation (1,154 ha) for enhancement of disaster reduction effects of mangrove ecosystem, validated / reaffirmed through CEPA activities
- including construction of a forest monitoring tower-cum-cyclone shelter / enhancement of participatory risk reduction training

# Case 3: Beach Erosion and Coastal Ecosystem at Risk

- Multiple benefits of coral reef ecosystem

e.g. Coastal protection against tropical storm and erosion

- Degradation of reef healthiness by local anthropogenic stresses and effects of climate change

- Capacity enhancement for policy formulation & management of the coral reef / island ecosystems for climate change adaptation

# For correct understanding of disaster risk and promotion of common understanding

Source: CECAM Project

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- JICA/JST Science and Technology Research Project Partnership with Tokyo Institute of Technology (2009-2015)

  To make policy proposals on adaptive reef management, based on responses studies against multiple stresses

  To develop Decision Support System for coastal area conservation

# Case 4: South-South Cooperation

The Erosion Control and Afforestation Project in Watersheds of Semi-Arid Aria in Chile (1993-1998)

7 years later in the afforestation site

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# Disseminating the Results of the Technical Cooperation in the Region

- JICA supports a recipient country first, then it supports other countries in the region
- Chili: The Erosion Control and Afforestation Project in Watersheds of Semi-Arid Aria in Chile (1993-98) ⇒ A series of TCTP ⇒ Adaptive Watershed Management with Emphasis in Environmental Services and Climate Change (TCTP, 2014-16)
- Panama: Project for Participatory Community Development and Integrated Management of the Alhajuela Lake Subwatershed (2006-2011) ⇒ Participatory Integrated Watershed Management (TCTP, 2014-16)

# Eco-DRR in JICA's Strategic Plan 2014-2020 in Nature Conservation Sector

Overall Goal of JICA

Harmonization between Nature Co
Activities

- To introduce appropriate methodology to mitigate Natural Disaster (Watershed Management, Costal Protection)
- To introduce mechanism such as PES(Payment for Ecosystem Services)

4 Strategic Objectives of JICA

**Sustainable Forest Management**

**For Global Warming (REDD plus)**

**For Strengthening Resilience**

3 International Agenda

**UNFCCC**

Mitigation

Adaptation

**UNCCD**

**UNCBD**

+RAMSAR etc.

Thank you for your attention!

**INCLUSIVE AND DYNAMIC DEVELOPMENT**