

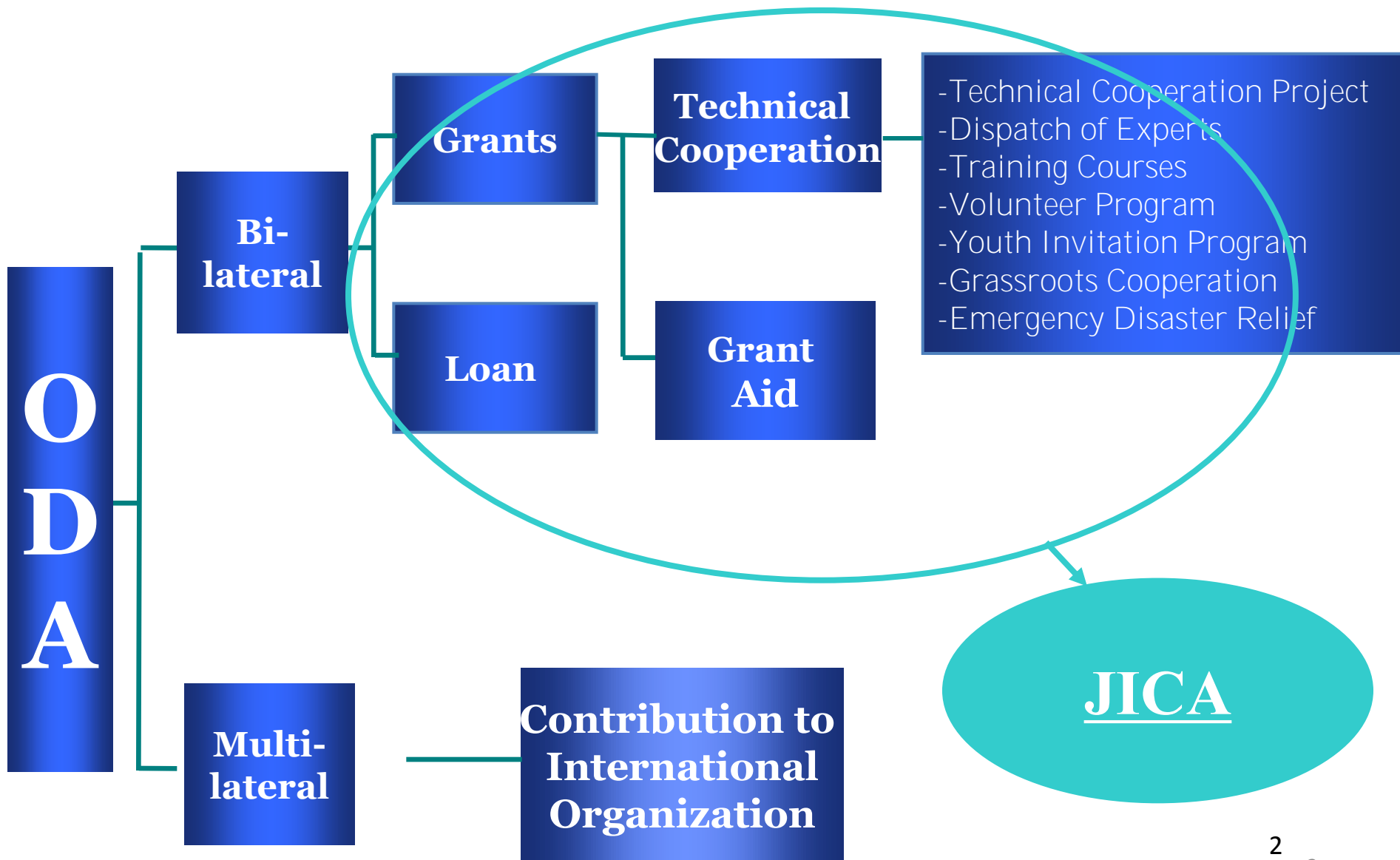


JICA's Experiences and Challenges to Eco-DRR in Development Assistance Context

Kei JINNAI

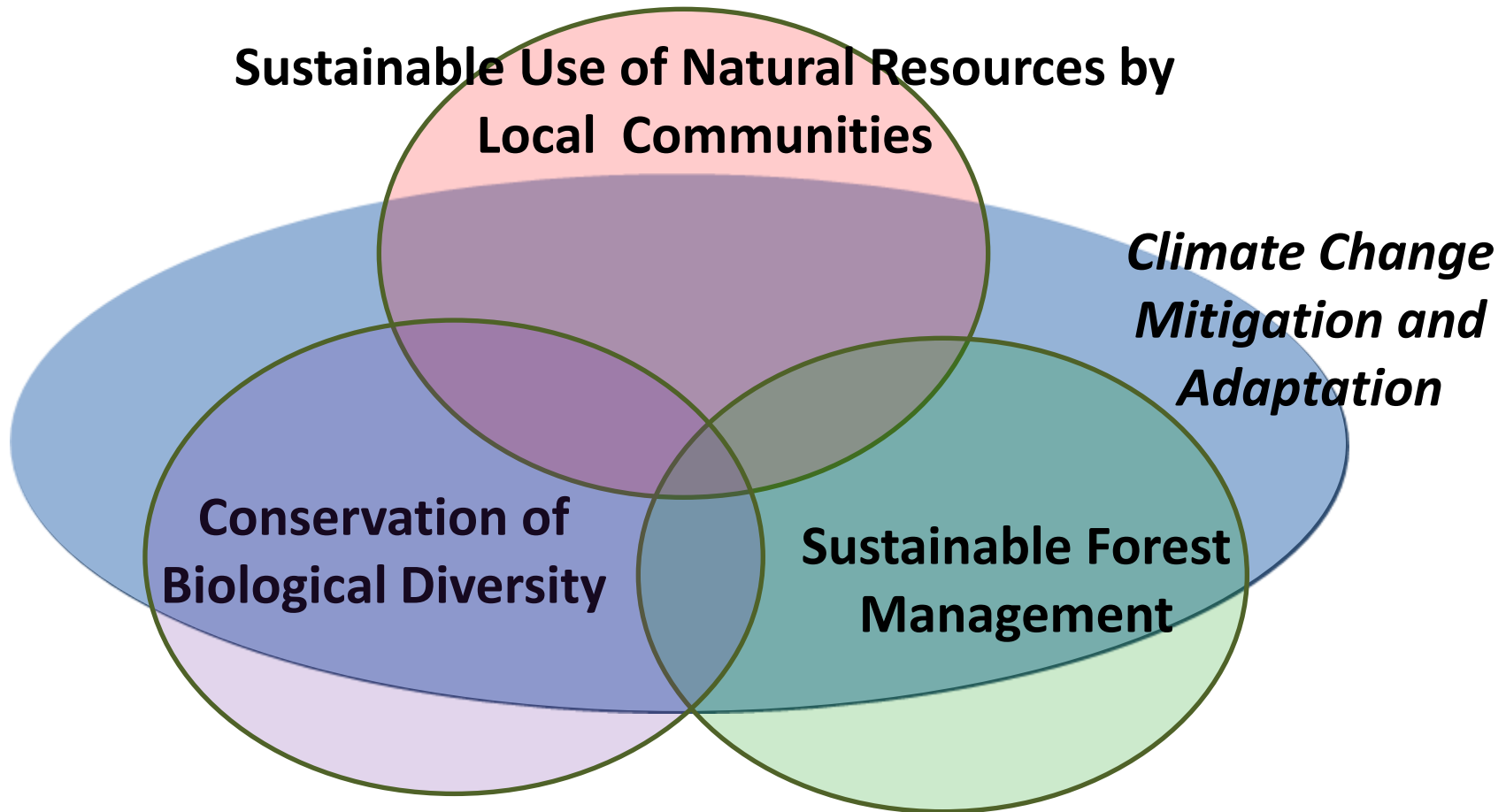
**Director, Forestry and Nature Conservation Division 1
Global Environment Department,
Japan International Cooperation Agency (JICA)**

JICA's Role in Official Development Assistance



Focus of JICA's Forestry and Nature Conservation

~Achieving Harmony – Human and Nature~



Forestry and Nature Conservation Responding to Natural Disasters

- 1. Earthquake in China**
- 2. Tropical Cyclone in Myanmar**
- 3. Coral Reef under Climate Change**



Case1: Chinese- Sichuan Earthquake

of Magnitude 8.0 on May 12, 2008
Perished 87,000 people and damaged
329,000 hectares of forest land

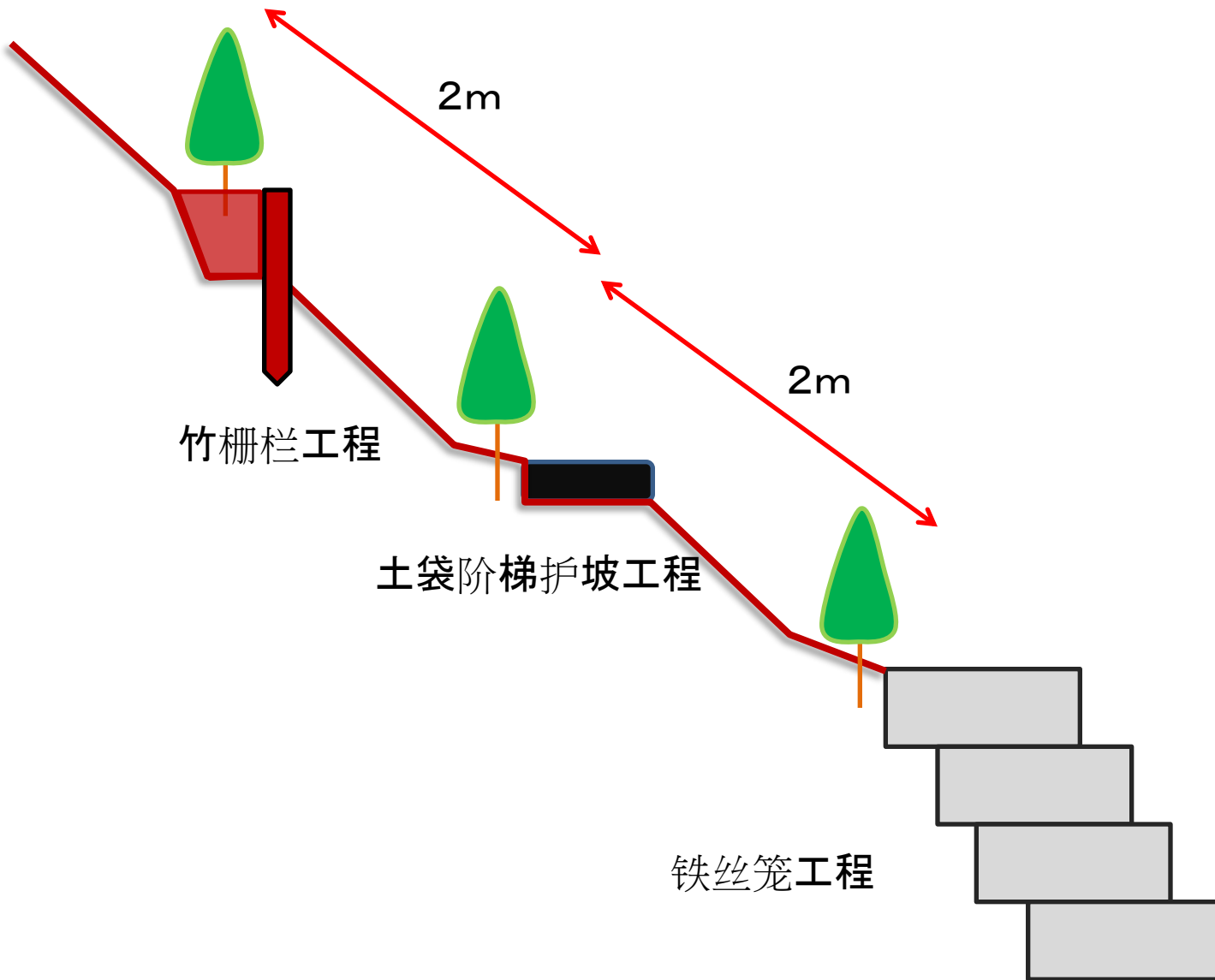




Project on Forest Restoration after the Earthquake in Sichuan Province 2010-2015

- 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

栽植工程









ムシロ伏せ工（汶川）

汶川県

2011年3月





Chinese- Sichuan Earthquake Project Summary (cont'd)

Challenges:

- introducing “*chisan* (治山)” concept of slope stabilization and tree planting, which is new to Chinese foresters

Opportunity:

- policy environment favorable for in-taking new technologies from abroad in “build-back better” situations in the aftermath of the earthquake
- also applicable to areas other than earthquake-stricken vegetation

Lessons:

- practice-based and stepwise approach of technology transfer
- demonstration and dissemination effects to other provinces and national administration
- physical limitation of applicability

Myanmar- Cyclone Nargis

Cyclone Nargis struck Myanmar in May, 2008

- 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

→ 12-meter high of tidal waves swept throughout deltas

→ JICA Technical Cooperation Project was on-going





Case 2. 2008 Cyclone in Myanmar **Summary of the project**

Title: Project on Integrated Mangrove Rehabilitation and Management through Community Participation in the Ayeyawady Delta

Duration: 2007-2013

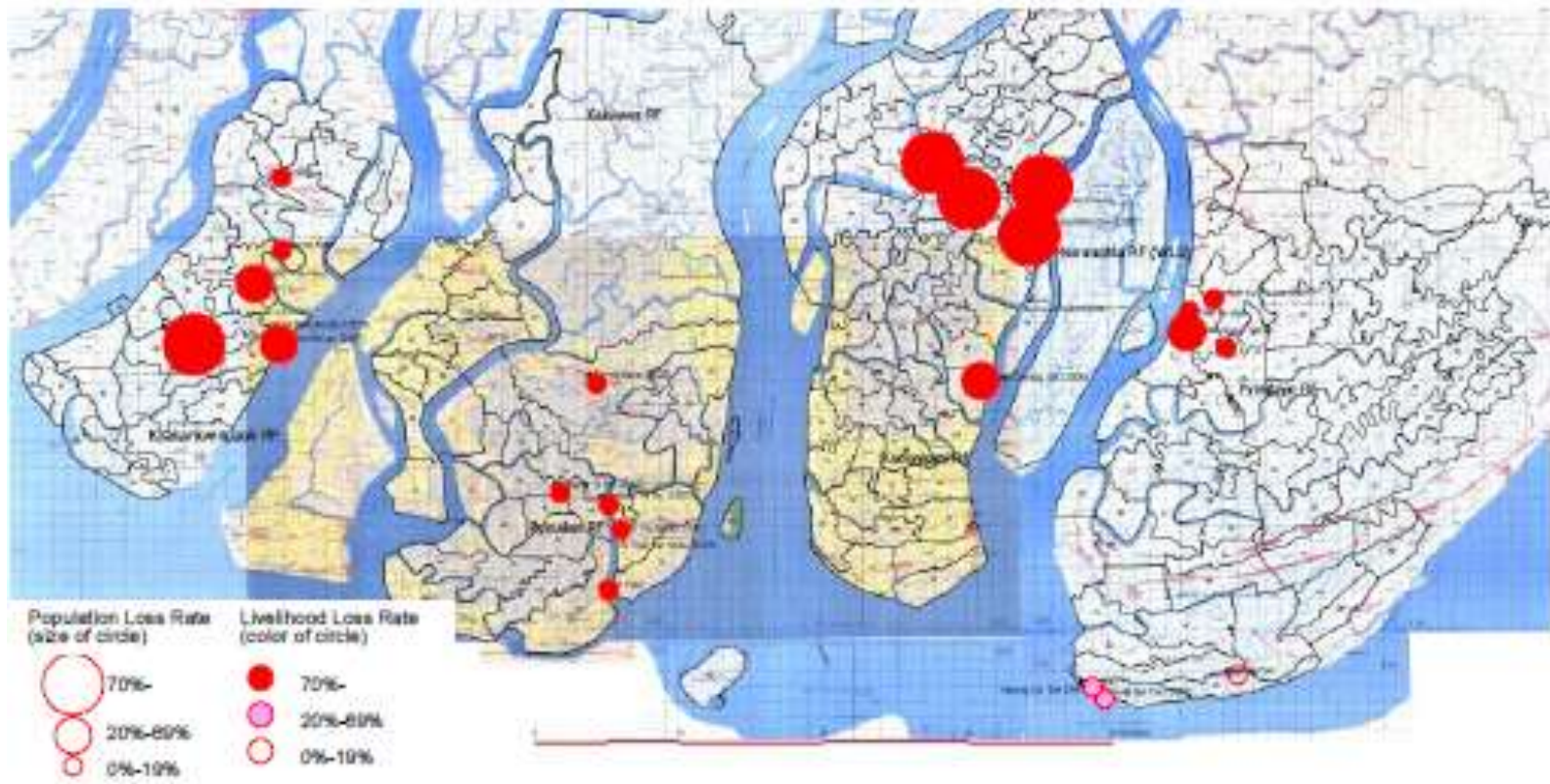
Population of Target Area : 400,000 apx.

Counterpart: Forest Department,
Ministry of Environmental Conservation and Forestry

Key Stakeholders: Community Forestry Users Groups;
Community Forestry Technical Task Force;
Local and National Government Agencies

Myanmar- Cyclone Nargis

Damage Distribution Map





2008 Cyclone in Myanmar

Newly added disaster recovery activities

NEW Challenge:

Rehabilitation from damages caused by 2008 Cyclone Nargys

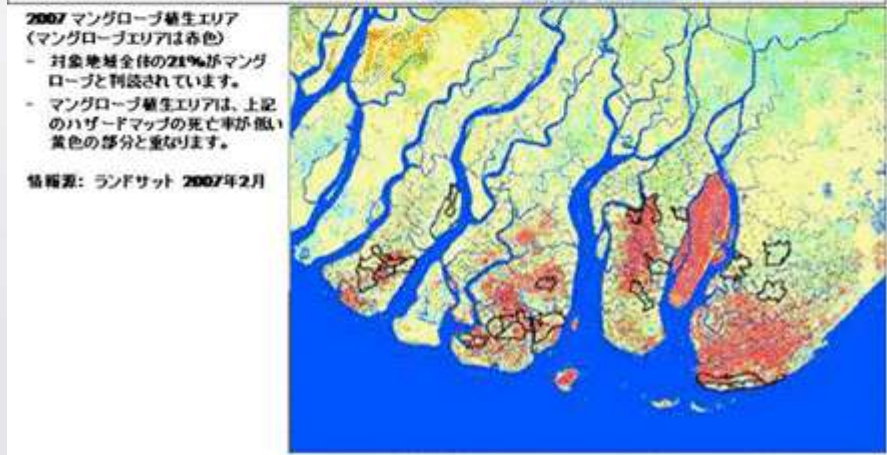
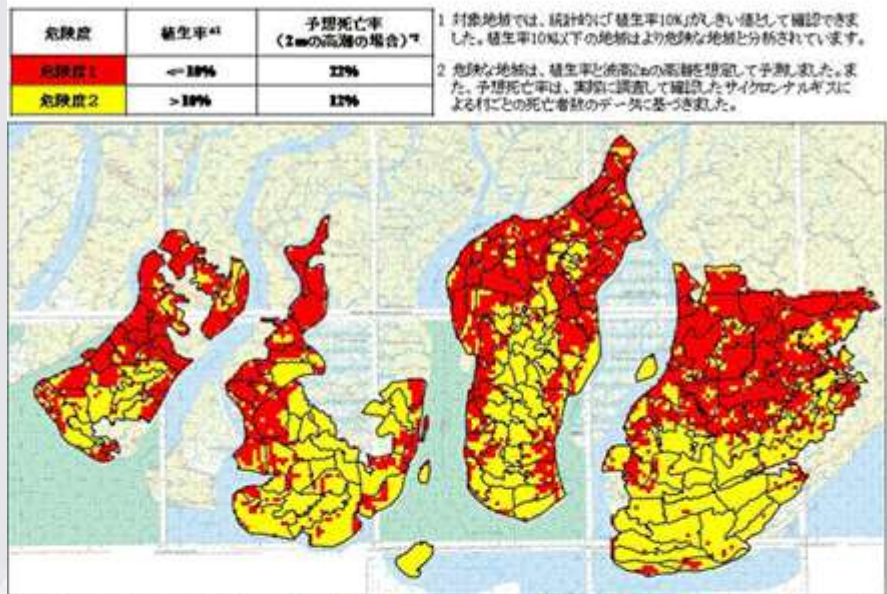
Project Scope was expanded and cooperation period extended:

- 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

Disaster reduction effects of mangrove ecosystem was validated and its value was reaffirmed through CEPA activities by the communities.

Myanmar- Cyclone Nargis

Hazard Map



Myanmar- Cyclone Nargis



Mangrove Reforestation
(Jul,2009)



View of Mangrove Nursery Bed Area
(Jul,2010)







Palau International Coral Reef Center

- Established in 2000 by Japanese Grant Aid Assistance for research and education
- JICA Technical Cooperation Project (2000-2012)
 - Phase 1: Institutional and Human resources Development
 - Phase 2: Monitoring Scheme for Marine Protected Areas Network
- JICA/JST co-funded Science and Technology Research Partnership with University of Ryukyus (2013-2018): Addressing Climate Change

Coral Reef 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
- Palau SATREPS project endeavors to make policy proposals on adaptive reef management, based on responses studies against multiple stresses

Summary

- Transfer of new technology in “build-back better” situation (China)
- DRR function of ecosystem verified and utilized for recovery activities (Myanmar)
- Coping with foreseen disasters under scientific uncertainties (Palau)

Eco-DRR ?

- Co-benefitting:
Ecosystem Conservation/Restoration
Disaster Risk Reduction
- Mainstreaming DRR: JICA's cross-sector strategy
- Time-frame and Cost/Benefit justifiable from DRR point of view ?
- Decision-making based on potentials and limitations of Eco-DRR