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JICA's Approach to Climate Change *Toward Low-Carbon and Resilient Development* *~collaborating with Japanese local governments ~*

*Background of the Project for Bangkok Master Plan on
Climate Change 2013-2023*



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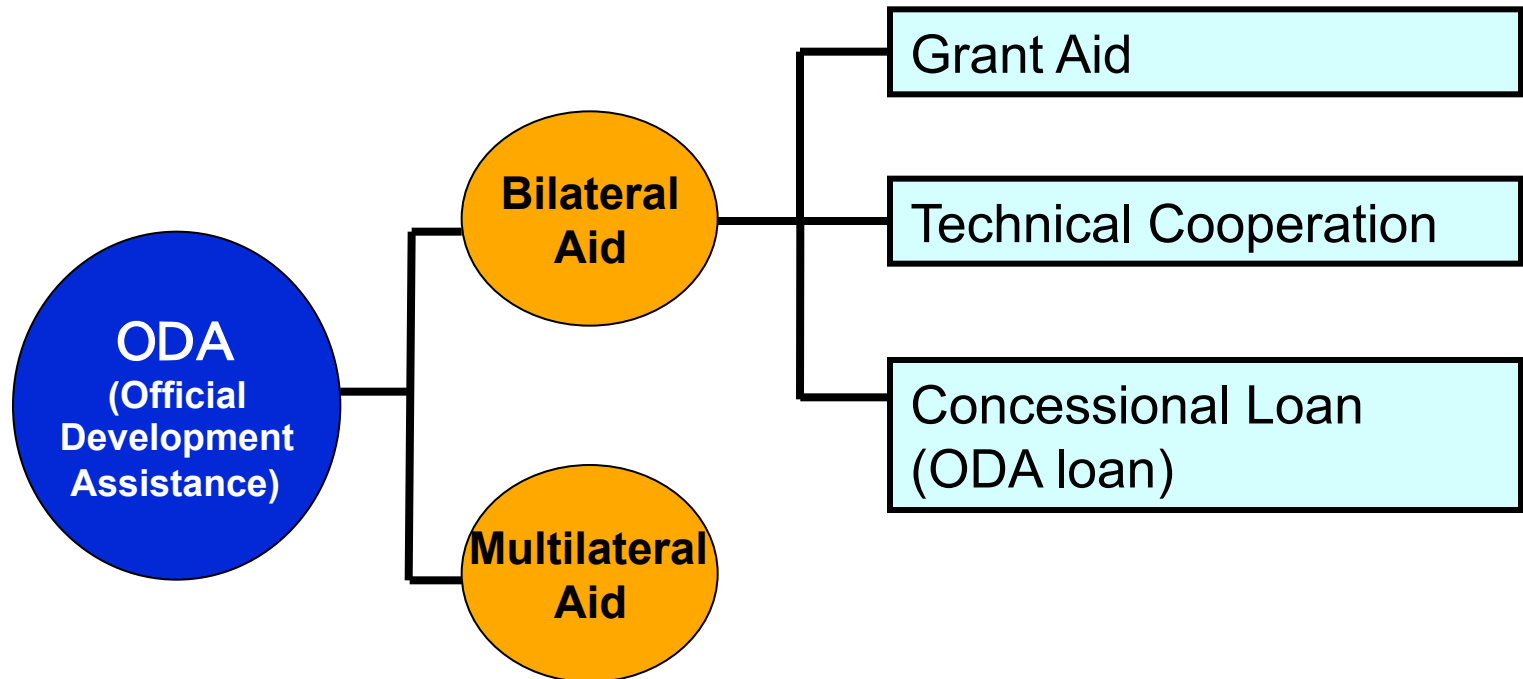
- **#1 Introduction**

- ◆ What is JICA ?

◆ About JICA

JICA extends Japanese ODA (Official Development Assistance) through integrated implementation of grant aid, technical cooperation and concessional loan.

Annual commitment was over US\$15 billion in 2014.



Mitigation

Tonga (Grant Aid)

Project for Introduction of Micro-Grid System with Renewable Energy for the Tonga Energy Road Map

Tonga formulated the "Tonga Energy Road Map 2010-2020" as a means of reducing its GHG emissions and enhancing its energy security, and has been working to introduce greater amounts of renewable energy. But there have been the difficulties that if large amounts of solar, wind and similar power were introduced, it would be hard to obtain a stable supply of electricity and, since the grid's frequency would fluctuate, maintaining electricity quality would be problematic. This project is supporting for the provision of solar power generation modules, micro-grid control equipment, grid stabilization equipment/systems and so forth, thus contributing to stabilization of the country's power grid and promotion of renewable energy.



Adaptation

Ethiopia (Technical Cooperation) Rural Resilience Enhancement Project

The southeast of Ethiopia is included in the "Horn of Africa" portion of the northeast of the African continent. This region is heavily prone to droughts and food crises, and in 2011 suffered drought damage thought to have been the worst for past 60 years. Given such situation, there are calls for medium- and long-term efforts that will strengthen endurance and resilience with regard to natural disasters. This project has been providing support, via implementation of surveys and verification operations, for strengthening resilience to climate change such as drought in the rural regions of Oromia and Somali Provinces.



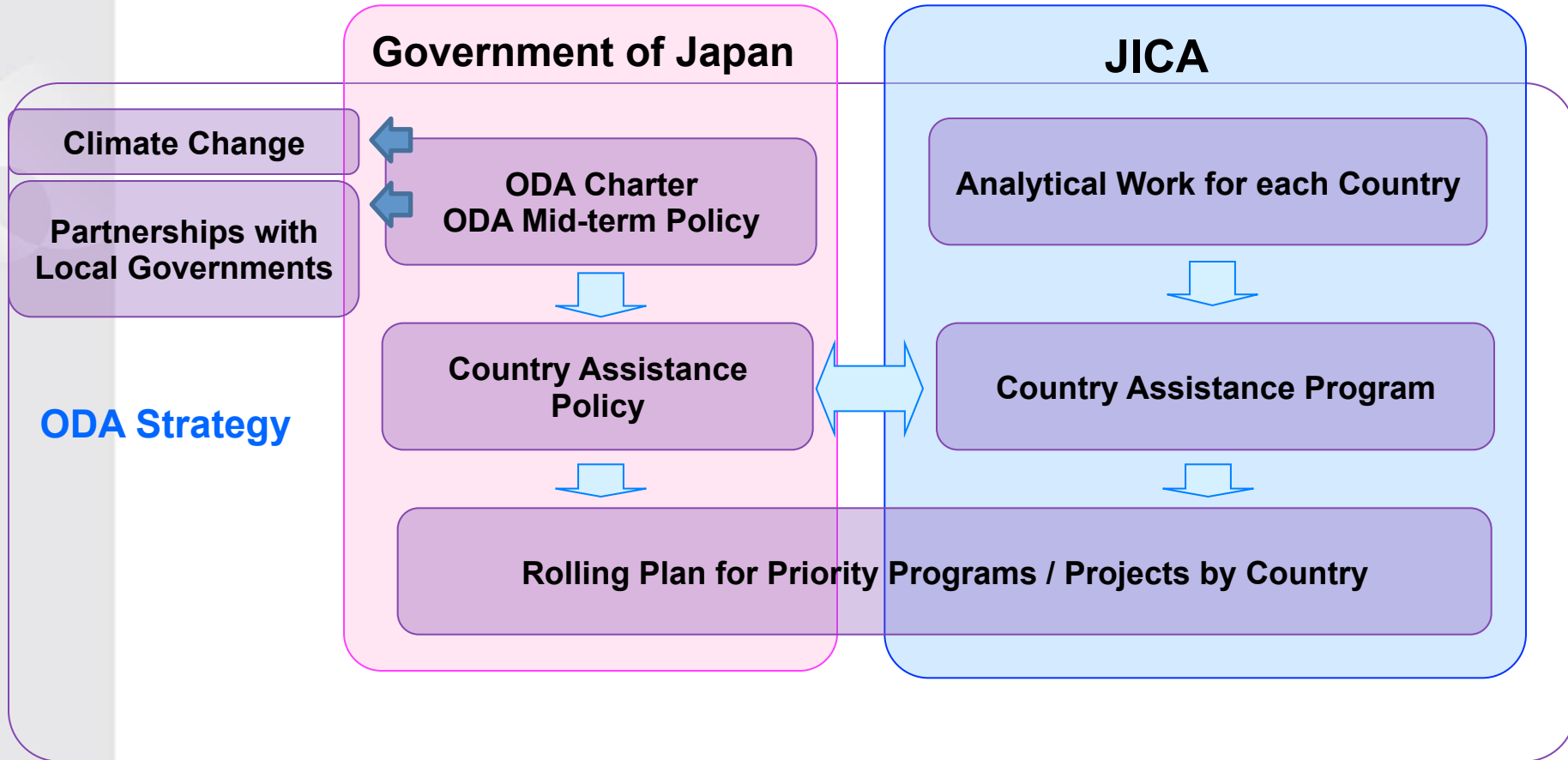
Mitigation

Costa Rica (ODA Loan) Guanacaste Geothermal Development Sector Loan

Costa Rica is the first non-industrialized nation to have pledged "carbon neutrality", and early announced a basic policy of mainstreaming renewable energy for its electricity sector development. Geothermal power generation is especially regarded as having high potential in this nation, and expected to be a domestic energy source capable of a stable supply throughout the year. This project aims to mitigate the impacts of climate change, and thus contribute to the country's sustainable development, by supporting construction of geothermal power plants so as to augment the proportion of renewable energy in its electric power supply.



◆ ODA strategy and JICA



#2 JICA's Cooperation for Low-Carbon and Resilient Development

◆ Direction of Low Carbon and Resilient Development Cooperation by JICA (Published in June 2012)

Guiding Principles

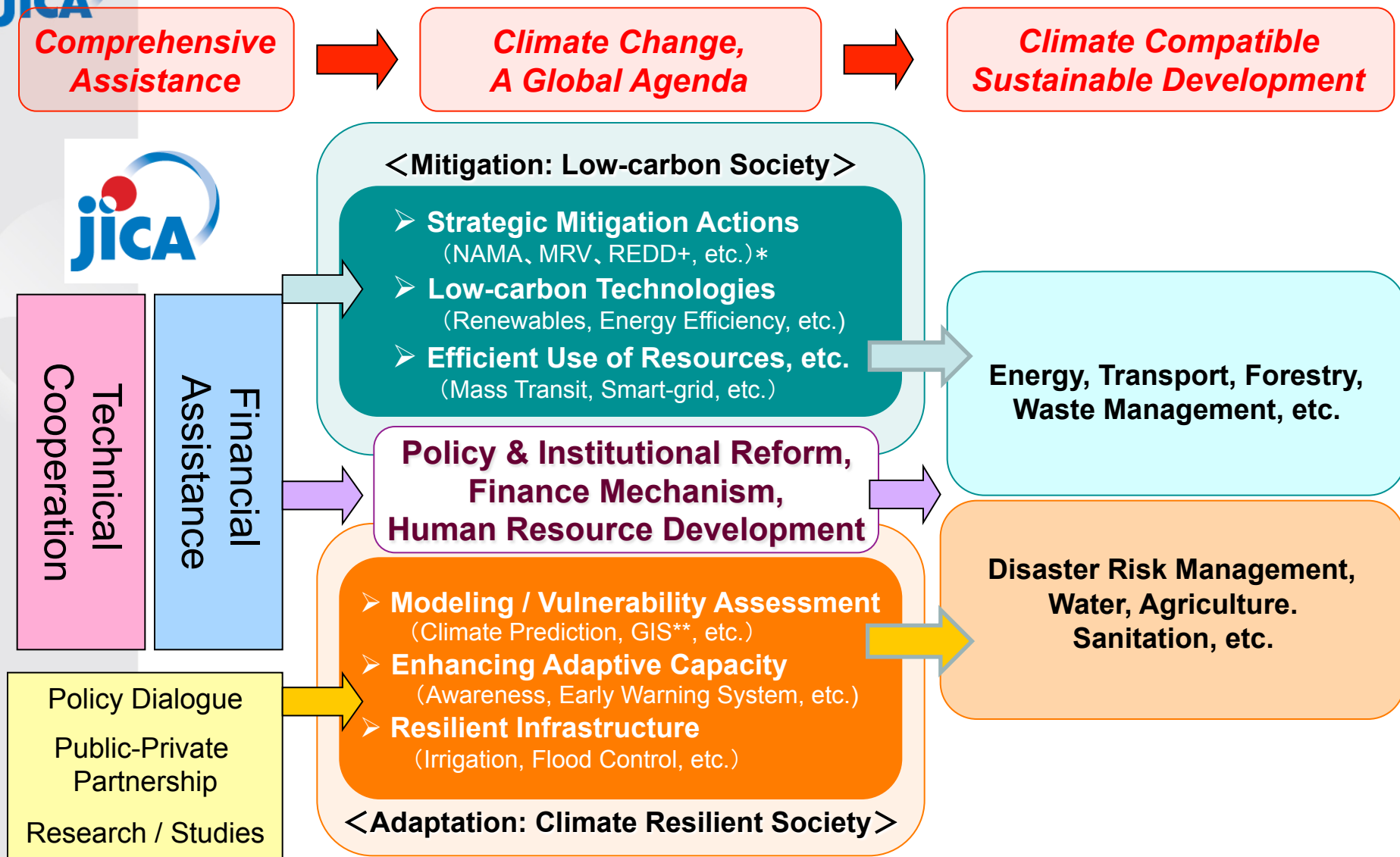
1. Promote climate compatible sustainable development
2. Extend assistance with integrated application of a range instruments
3. Establish partnership with **diverse stakeholders**

Concrete Responses and Direction

1. Mitigation: Towards a Low Carbon Society
2. Adaptation: Towards a Resilient Society
3. Mechanisms to Accelerate Mitigation and Adaptation



◆ JICA's Approach: Low-Carbon and Climate Resilient Development Cooperation



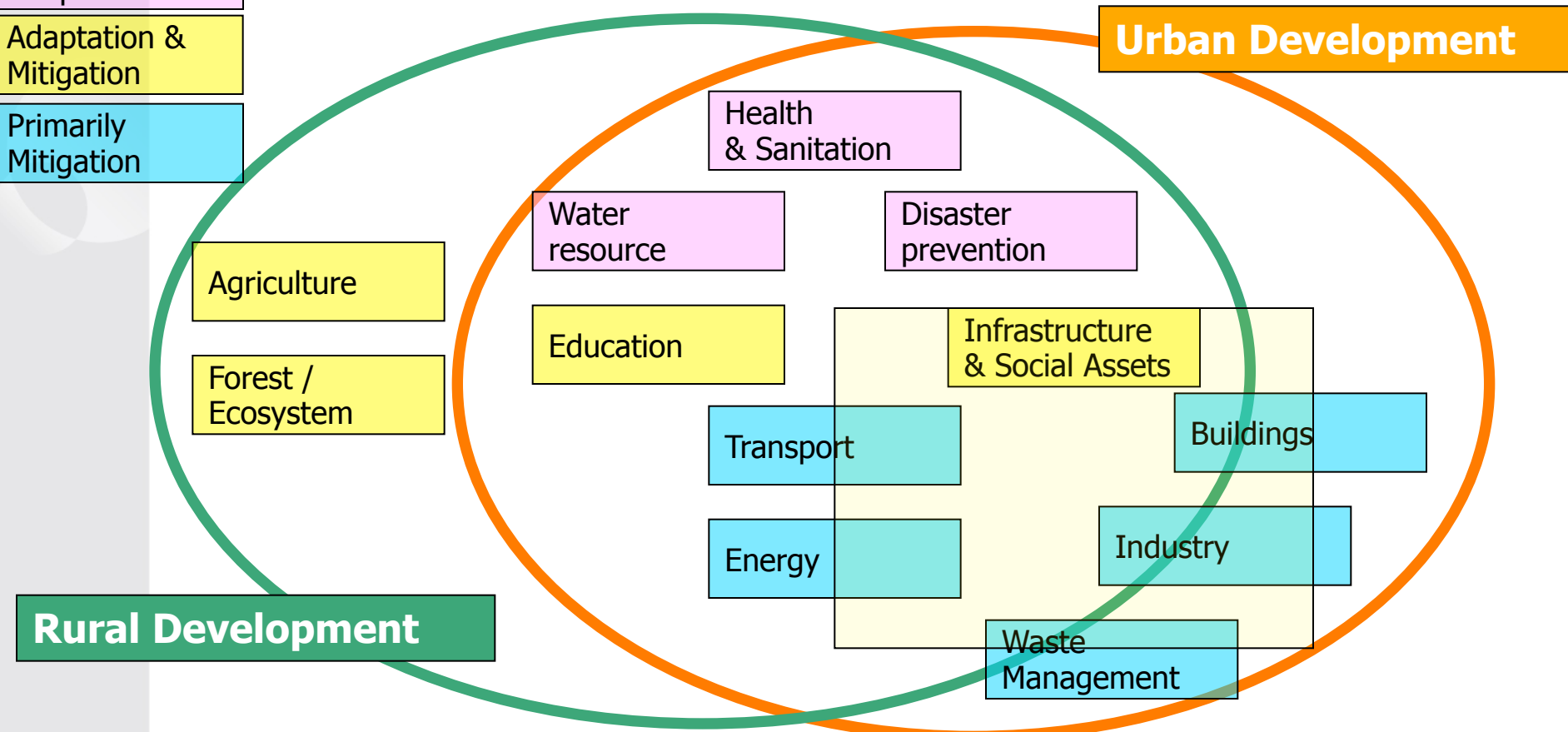
• NAMA (Nationally Appropriate Mitigation Actions)
 MRV (measurable, reportable, verifiable)
 REDD+ (Reduction of Emission from Deforestation and Degradation)
 **GIS (Geographic Information System)

Sustainable Development and Low-Carbon / Climate Resilient Actions in Developing Countries

Primarily Adaptation

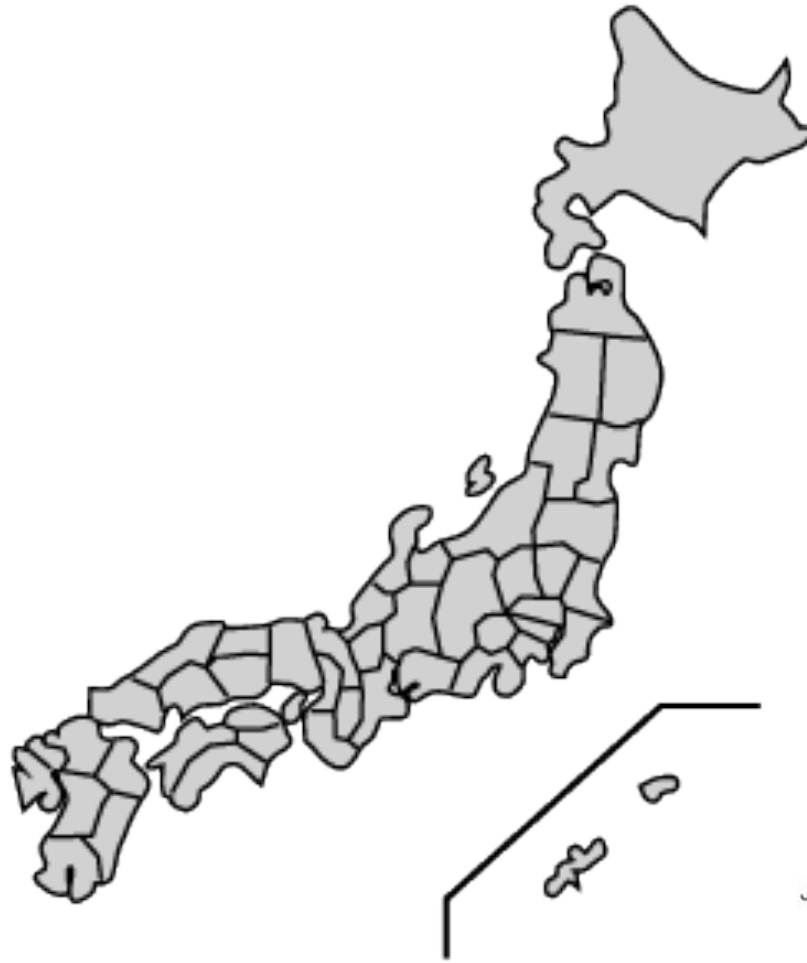
Adaptation & Mitigation

Primarily Mitigation



➤ climate actions should be implemented in the context of sustainable development

#3 JICA's collaboration with Japanese Local Governments



◆ Training in Japan implemented by Local Governments (Examples of training themes in the fields of Law-carbon / Climate resilience)

- [Tokyo Metropolitan Government](#)

Activities for Low Carbon City / Community Development, Certification for Energy Saving in Buildings, Cap-and-trade Emissions Trading System

- [City of Osaka](#)

Manual to Promote Global Warming Countermeasures , Measures against Heat Island Phenomenon, Map of Cool Spots

- [City of Yokohama](#)

Implementation Plan of Global Warming Countermeasure, Yokohama Smart City Project (Energy Saving , Urban Planning), Stakeholder engagement through “Yokohama Eco School (YES)”

- [City of Kitakyushu](#)

Urban Planning, Improvement of Urban Area, Disaster Risk Management, Forest and Green Space Conservation, Transportation System for Monorail

- [City of Hiroshima](#)

Comprehensive Transport Strategy, Tram System

- [Mie Prefecture](#)

Program to Promote the Adaptation to Global Warming in Daily Life, Vulnerability Assessment

Contributed to Bangkok Master Plan



◆ JICA Partnership Program (JPP)

Partnership with Japanese NGOs, local governments and universities

- ✓ JICA Partnership Program (JPP) was introduced in 2002 to support the implementation of **projects formulated by** Japanese NGOs, **local governments** and universities to utilize their accumulated knowledge and experience in technical assistance activities.
- ✓ JPP is **based on proposals from** NGOs, **local governments** and universities in Japan, and agreement with the recipient government is required prior to implementation of the project.
- ✓ **A selected project receives assistance from JICA** up to 10-100 million yen for the project expenses for a cooperation period of within 3-5 years.



JICA Partnership Program with Local Government -Projects in the environmental fields- (examples)

| Year Implemented | Country | Project Name | Municipality Proposed |
|------------------|----------|---|-------------------------|
| FY2013-2015 | Mongolia | Ulaanbaatar Afforestation Technical Assistance Project | Hokkaido pref. |
| FY2013-2015 | Cambodia | Improvement of Drainage/Sewerage System and Water Environment in Siem Reap | City of Kofu, Yamanashi |
| FY2012-2014 | China | Project for Measure against Desertification in Rindenken | Niigata pref. |
| FY2012-2014 | Malaysia | Environmental Conservation and Domestic Solid Waste Management in Kuching, Sarawak, Malaysia | Town of Moteги, Tochigi |
| FY2012-2014 | Morocco | Knowledge Enrichment Program For Utilizing Renewable Energy for Sustainable Town Development | Gifu pref. |
| FY2012-2014 | Malaysia | Training Program for Biomass Carbonization by the Yamasen Pool-type Oven | City of Yame, Fukuoka |
| FY2012-2015 | Vietnam | HoiAn's Naha Model Solid Waste Management Project | City of Naha, Okinawa |
| FY2012-2014 | Brazil | Improvement of garbage recycle system in Mogi das Cruzes, Sao Paulo, Brazil | City of Toyama |



<Examples> Projects of JICA Partnership Program (Local government type)

-Projects in environmental fields-

| Year Implemented | Country | Project Name | Municipality proposed |
|------------------|-----------|---|-----------------------------|
| FY2013-2015 | Mongolia | Vegetables Production Engineering Support Project by Saving Energy Protected Horticulture Using Shallow Geothermal Renewable Energy | Hokkaido pref. |
| FY2013-2014 | Myanmar | Joint Project on Improvement of Waste Management in Yangon | Tokyo Metropolitan gov. |
| FY2013-2015 | Mongolia | Regional improvement cooperation by revegetation of Sainshand Industrial Complex and young tree production of native species | Niigata pref. |
| FY2013-2015 | Vietnam | Establishment of Waste Material Circulation System Based on Marine Transportation in Ha Long Bay | City of Sakai, Osaka |
| FY2013-2015 | Myanmar | Capacity Development of Sewer Pipes O&M and Rehabilitation Project in Yangon City | City of Osaka |
| FY2013-2015 | Indonesia | Project for Enhancing Fire-Fighting Techniques against Peat-Land and Forest Fire in Balikpapan, Indonesia | City of Kitakyushu, Fukuoka |
| FY2013-2015 | Indonesia | Indonesia・Promote for efficiency of waste management in Medan City— Recycling of city waste , and effective use of the waste of palm oil industry — | City of Kitakyushu, Fukuoka |

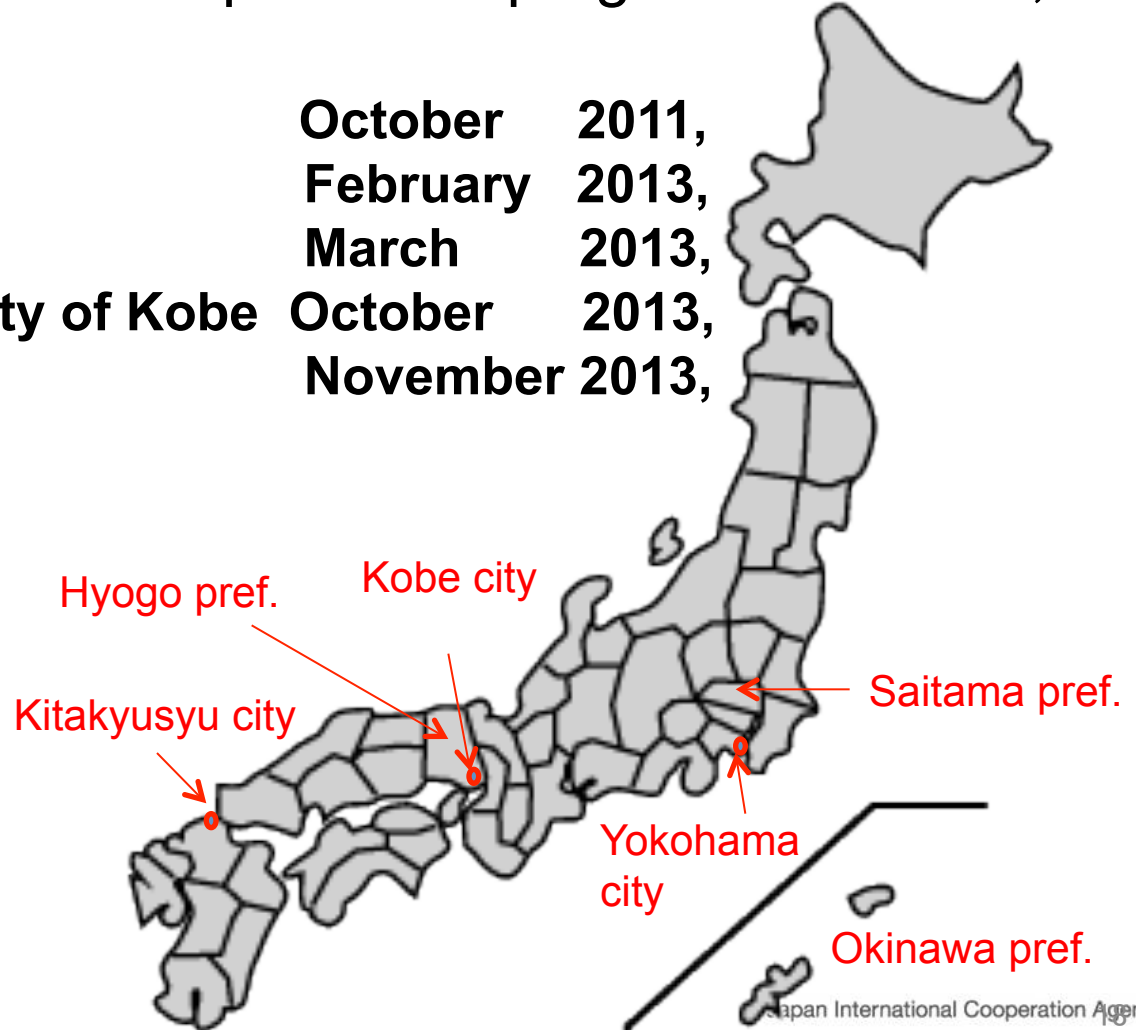
◆ Comprehensive Partnership Agreements with Local Governments

• JICA signed comprehensive partnership agreements with;

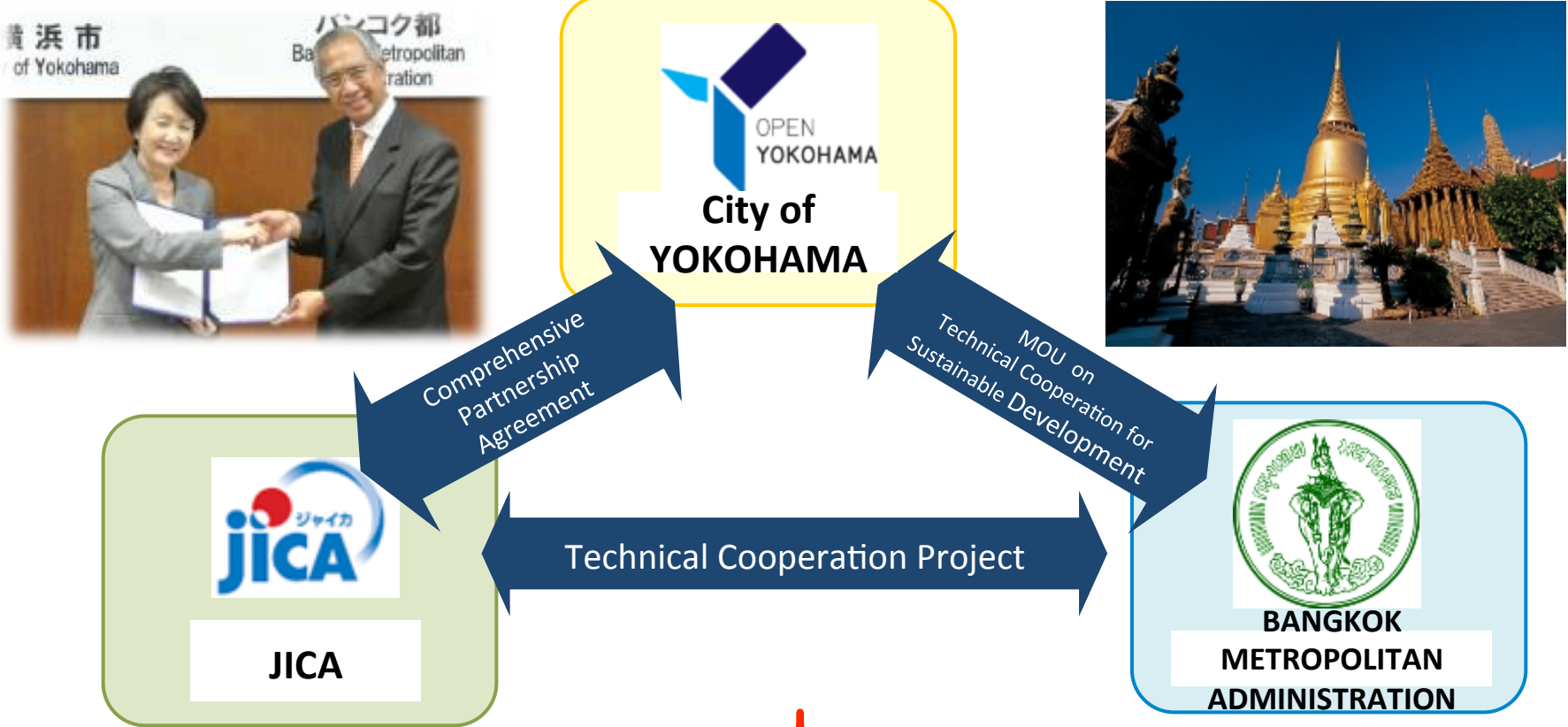
| | |
|--|-----------------------|
| City of Yokohama | October 2011, |
| City of Kitakyusyu | February 2013, |
| Okinawa prefecture | March 2013, |
| Hyogo prefecture and City of Kobe | October 2013, |
| Saitama prefecture | November 2013, |



Yokohama



- ❑ Drafting Bangkok Master Plan on Climate Change 2013-2023
- ❑ Capacity development for implementation of the Bangkok Master Plan



Bangkok Master Plan on Climate Change(2013-2023)

Transport

Energy

Waste and Wastewater

Green Urban Planning

Adaptation

Thank you for your attention.

Merci pour votre attention.

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