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Japan International Cooperation Agency (JICA)
Office for Climate Change
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Direction of Low Carbon and Resilient Development Cooperation by JICA

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I . Climate Change and Challenges for Developing Countries

1. Climate Change

Increase of anthropogenic greenhouse gas emissions due to the use of fossil fuel, deforestation, etc., is the major cause of climate change, including rising temperature and increasing extreme weather events. Climate change is an imminent global threat endangering human security through worsening natural disasters, exhausting water resources, etc. It is expected that greenhouse gas emissions will continue to grow and that the 21st century will encounter serious changes in the climate which are worse than those observed in the 20th century.

2. Challenges for Developing Countries

Developing countries are vulnerable to climate change not only due to the negative impact of climate change itself, such as torrential rain, drought, submergence of lowlands due to sea level rise, but also due to lack of adaptive capacity, such as poor infrastructure and absence of economic, social institutions. Least Developed Countries (LDCs) and Small Island Developing States (SIDS) are particularly vulnerable to climate change, because many residents without sufficient capacity to adapt to climate change depend on the natural environment to make their living.

In order to avoid negative impact of global climate change to the extent possible, it is vital for developing countries, especially the fast growing middle income countries, to aim for climate compatible sustainable development to simultaneously achieve economic development and poverty reduction without substantial increase in greenhouse gas emissions. In LDCs and SIDS, using clean energy to secure energy access to the poor is a matter of priority.

3. Countermeasures by Developing Countries

Promoting adaptation measures in sectors such as disaster prevention, water resource management, agriculture and health is crucial for building resilient society. Implementing mitigation measures in sectors such as energy, transportation, waste management and forestry is needed for building low carbon society and reducing greenhouse gas emissions. The sectors in need of

adaptation and/or with potential of mitigation are indispensable for achieving sustainable development. Measures to combat climate change in developing countries and solutions for sustainable development are two sides of the same coin.

II. Guiding Principles

Japan can contribute to the global challenge of adaptation to climate change and reduction of greenhouse gas emissions by utilizing know-how accumulated through responses to domestic climate related disasters and cutting-edge technology to promote low carbon development. Helping developing countries tackle climate threats and challenges will stabilize and prosper the international community including Japan.

The Government of Japan (GoJ) has adopted policies to support a wide range of developing countries in alignment with the progress of international negotiations, including countries vulnerable to the negative impact of climate change and those making contributions to reduce global greenhouse gas emissions.

Based on the policies adopted by the GoJ and by utilizing the experiences, achievements and technology of Japan, Japan International Cooperation Agency (JICA) will actively support measures to tackle climate change in developing countries according to the following principles.

1. Climate Compatible Sustainable Development

The mission of JICA is to help inclusive and dynamic development in developing countries. Specifically, JICA endeavors to contribute to sustainable development through equitable economic growth and human security. In light of this mission, JICA will help activities to curb greenhouse gas emissions and to enhance capacity to adapt to climate impacts in developing countries in the context of sustainable development.

2. Comprehensive Assistance using an Array of Schemes

JICA will support a wide range of needs in developing countries through the

following schemes.

- a) Technical cooperation (dispatching experts, accepting overseas trainees, supporting preparation of development plans, etc.)
- b) Financial cooperation (finance to projects (such as infrastructure), programs (such as support for development policy), and financial intermediaries (responding to small scale financing needs through financial institutions in developing countries, called “two-step loans”)
- c) Other types of cooperation (policy dialogue with developing country governments, utilization of cutting-edge climate related technology and know-how of the private sector, analytical work, etc.)

When supporting individual mitigation and adaptation activities, JICA will apply the PDCA cycle (*) to manage both development and climate impacts, such as the quantitative MRV (measurable, reportable, verifiable) greenhouse gas emissions reduction.

(*) PDCA refers to a management cycle comprising four steps (Plan, Do Check, Act) for continuous improvement.

3. Collaboration with Development and Climate Partners

JICA aims to be a good partner of diverse development stakeholders, including international organizations, aid agencies, NGOs, universities, local governments and the private sector. JICA will lead efforts to build international frameworks for development cooperation. In order to deliver quality support for climate compatible development in developing countries, JICA will take into account the discussion in international negotiations and good practices for providing technical and financial support to developing countries. In light of the above, JICA will promote partnership with stakeholders engaged in policies and actions related to climate change, in addition to those engaged in development.

III. Concrete Responses and Direction

Based on the aforementioned guiding principles, JICA will actively extend support to mitigation, adaptation and mechanisms to accelerate mitigation and adaptation in developing countries.

1. Mitigation: Towards a Low Carbon Society

(1) Formulating National Plans and Sector Strategies

For steady implementation of mitigation measures in developing countries, it is crucial to formulate appropriate national and sector level plans and strategies, such as;

- Low-carbon / low-emission Development Strategy (LCDS/LEDS)
- Nationally Appropriate Mitigation Actions (NAMAs)
- Greenhouse gas emission inventory
- Reduction of Emission from Deforestation and Degradations, etc. (REDD+) at the national and administrative levels.

When formulating these plans and strategies, it is desirable to have an accurate understanding of the current volume of greenhouse gas emission and to analyze future emission trajectory of greenhouse gas based on medium to long term economic and social development.

(2) Building Efficient Social and Economic System

One of the important pillars of JICA support for mitigation activities is building social and economic system to improve efficiency of resource use in developing countries, such as;

- Energy sector / development of smart grid, improvement of energy efficiency in households
- Transport sector / preparation of urban mass transit master plans
- Waste management sector / introduction of comprehensive waste management system
- Forestry sector / promotion of scientific forest management utilizing satellite images

(3) Developing and Diffusing Low Carbon Technologies

Developing and diffusing low carbon technologies is one of the emphases of JICA support for mitigation activities, such as;

- Energy sector / utilization of clean energy (wind, geothermal, solar, etc.)
- Transport sector / development of public transport system (subway, light rail transit (LRT), etc.)
- Waste management sector / introduction of semi-aerobic landfill technologies, wastewater plants equipped with facilities for recovery and utilization of methane gas
- Forestry sector / promotion of afforestation activities with consideration to changing climate conditions

2. Adaptation: Towards a Resilient Society

(1) Formulating National Plans and Sector Strategies

For steady implementation of adaptation measures in developing countries, it is crucial to formulate appropriate national and sector level plans and strategies, such as the National Adaptation Plans (NAPs). When formulating these plans and strategies, it is desirable to incorporate the results of scientific analysis, such as climate change prediction and impact analysis based on GIS (geographic information system). On the other hand, it is also necessary to support responses to meet the needs in developing countries based on precautionary principle and no-regret policy with consideration to adaptive capacity specific to the region, sector and/or community.

(2) Enhancing Adaptive Capacity for Climate Related Disasters

One of the important pillars of JICA support for adaptation activities is enhancing adaptive capacity in vulnerable regions, sectors, communities, etc., such as;

- Disaster prevention and water resource sectors / training to enhance coping capacity to increasing climate related disasters, introduction of early warning system

- Agriculture sector / emergency assistance to farms in drought regions
- Health sector / capacity building for precautionary measures in region where the risk of contagion to malaria may increase as a result of climate change (enhancement of capacity for examination and diagnosis, etc.)

(3) Developing Resilient Infrastructure

Developing resilient infrastructure is also one of the emphases of JICA support for adaptation to medium to long term climate change, such as;

- Disaster prevention and water resource sectors / developing flood control facilities in areas vulnerable to climate impacts, increasing water supply facilities in areas vulnerable to droughts
- Agriculture sector / introducing water-saving irrigation facilities to cope with worsening impact of climate change

3. Mechanisms to Accelerate Mitigation and Adaptation

(1) Policy and Institutional Reform

In addition to support for individual mitigation and adaptation measures, JICA will promote measures to tackle climate change through support for creating legal and institutional framework, formulating policies, establishing standards, etc. For example, when developing countries formulate national development plans and sector strategies, JICA can utilize its technical and financial cooperation scheme, conduct policy dialogues with developing country governments, consider introduction of policy and institutional reforms to promote concrete mitigation and adaptation actions, and monitor implementation.

(2) Finance Mechanism

Architecture of functioning finance mechanism is another key challenge for developing countries in promoting mitigation and adaptation measures. JICA is committed to align its assistance with the discussion at the international negotiations and to consider utilization of international market mechanisms to provide economic incentives for implementation of climate related measures in developing countries. JICA will also conduct dialogue with developing country

governments and design appropriate support scheme to catalyze public and private funds for promoting mitigation and adaptation in developing countries.

(3) Human Resource Development

In addition to support for individual mitigation and adaptation measures, JICA will promote human resource development and support developing countries acquire conceivable knowledge and technologies, such as those necessary for policy and institutional reform, finance mechanism, climate change prediction, impact evaluation, and low carbon technologies to training for disaster prevention. These support activities will target different levels of stakeholders, from community members to central government officials.

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