Japan's action on Adaptation to climate change

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1. Domestic Adaptive Measures

Japan is studying adaptive measures related mainly to coastal areas, social infrastructure, and agricultural production.

As proposed by the IPCC, there are three countermeasures for the adverse effect of climate change, namely, deliberate withdrawal, adaptation and prevention. In Japan, where coastal land is used to the maximum, adaptation and prevention are the possible options on the assumption that we have little choice but to use risky areas. There are a variety of strategies from software-related ones, such as planning and systems, to hardware-related ones, such as physical structures. Studies must be promoted with a view to minimizing any effect. In order to understand the trend of increasing sea levels for ports, harbors, and coasts, continuous monitoring must be undertaken by each organization, and the observation results must be evaluated regularly. Therefore, continuous monitoring of sea level rise has been promoted, to utilize its outcomes to future national land conservation plan and coastal hazard maps.

It is expected that global warming will have an effect on future domestic agricultural production. Some agricultural methods, such as developing varieties better suited to the changed climate, and changing crop types and cultivation methods are considered as one of the possible options to adapt environmental changes, and some related researches have been promoted.

2. Case introduction of Japan's assistance for non-Annex I countries in the field of adaptation

(1) Case 1: South Pacific Resource Book

Not only domestic adaptive measures, we also recognize it as one of the important approaches to tackle global warming to support development of adaptation strategy in the region which is vulnerable to climate change. In order to fulfill capacity building, and to develop resources to carry out vulnerability and adaptation assessment, the Ministry of the Environment of Japan has undertaken research and other studies concerning sea-level rise attributed to climate change in Pacific Island Countries from 1992, in cooperation with the South Pacific Regional Environment Programme(SPREP) and countries in the Pacific Islands Region.

Based on this experience, from year 1999 to 2000, the Ministry of the Environment of Japan and SPREP implemented a cooperative study, "Assessment of Possible Climate Change and Sea-level Rise Activities to be undertaken in Pacific Island Countries in Cooperation with Japan".

The South Pacific Resource Book is an outcome of over ten years of research and it provides people with up-to-date knowledge concerning climate change and sea-level rise, adaptation to

adverse impacts including climate related disasters, and mitigation options. It is also a useful tool for policy makers as a guide to establish adaptation policies, for educator as text book to raise people's awareness including school students, and for other stakeholders to get information useful for their own consideration. It was first introduced at the Third Japan-PIF(Pacific Island Forum)Summit Meeting in Okinawa, May 2003 and is now being distributed in the Pacific region.

(2) Case 2: The Project for the Seawall Construction in Male's Island in Maldives

The rise in the sea level brought about by global warming was a serious issue concerning survival for a state such as the Maldives which has an average elevation of 1.6 meters. When high tides flooded the capital city of Male' in 1987 and 1988, more than half of the area of Male' flooded, an outbreak of cholera occurred, and almost six million dollars' worth of damage was caused. Against this background, Japan carried out a Development Study on the "disaster prevention plan of the coast of Male' island" between 1991 and 1992, in response to the request by the Government of Maldives. Then, in order to follow up recommendations in the study, the Government of the Maldives requested Grant Aid from Japan for seawall construction on Male' island.

The protection of basic living and public facilities in the eastern area of Male' island was attempted through the construction of the seawall. Furthermore, the artificial beach installed in response to the request of the Government of Maldives, was used for swimming, jogging and other sport activities. In addition, the seawall facilities had the additional effect of preventing sediment discharge which would result from the high tides in the reclaimed land area where the Government of Maldives implemented reclamation work as a measure to address congestion. Furthermore, since the seawall facilities were durable, repair costs would be negligible, which would save the Government of Maldives the large costs conventionally needed for restoration of existing seawalls.


Male' Island


Seawall
