

## Recent research on climate change impacts assessment and adaptation policies in Japan

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Recently, comprehensive research projects tackling to assessment of climate change impacts and adaptation have been conducted in Japan. Some ministries, such as “Ministry of Environment” and “Ministry of Education, Culture, Sports, Science and Technology” have provided large research fund which is over one hundred million yen per year. In my presentation, I will introduce the outline of the “S-8” project”

Not only research projects, Japanese adaptation policies have been promoted in recent years. In the fourth basic environmental plan, Japanese government referred to “the necessity of adaptation” for the first time. In the innovative Energy/environmental Plan, preparing national adaptation plan was decided. In order to summarize recent scientific information about climate change in Japan, integrated report on observation, projection and impact assessment of climate change was released on March, 2013. Now, national adaptation plan has been in preparation. Quantitative analysis will be carried out until next summer and National Adaptation plan will be approved in summer, 2015.

AIM impact team energetically tackling to the “S-8 project” which is supported by the ministry of the environment in Japan. Targeted area is whole and regional area in Japan and Asia-Pacific region and research fields cover water resources, forests, agriculture, coastal zones and human health. The project has two main objectives. First one is to assess climate change impact assessment focusing on whole Japan under different GHG concentration stabilization scenarios and adaptation strategies. This project apply new climate scenario with high accuracy and resolution provided under CMIP5 and we develop advanced model for assessment of climate change impacts and adaptation strategy. Second objective is development of a planning method for adaptation strategy focusing on Japanese local government and developing countries in Asia-Pacific region. AIM impact team has developed a simplified tool to assess the impacts of, and vulnerabilities and adaptation to, climate change considering uncertainty in the assessment.

The project consists of three themes. Theme one provide the climate change impact assessment for whole Japan considering the effects of adaptation and provide quantified information to the theme 2.

The theme 2 utilizes the quantified information to develop a planning method for adaptation strategy at the local government. The theme 2 involves some local governments into their collaborative research and has been supporting the adaptation policy at local government. Based on the results of the research in Japan, in order to analyze the order of priority and cost-effectiveness of implementing adaptation measures elsewhere in the Asia-Pacific region, there 3 has developed and standardized the indexes for the assessment of vulnerability, impacts, and adaptation effects that are applicable to developing countries. This could contribute to the planning and implementation of adaptation measures in those countries, where severer impacts are expected.

To integrate research outcomes developed by the theme 1 and provide the research outcomes to theme 2, AIM impact team has been developing the AIM/Adaptation[Policy]. This tool helps the theme 2 utilize the quantified information developed by the theme 1. This tool is a database including socio-economic scenarios, climate scenarios and results of impact assessment. And user can easily see the maps at prefectural and municipal levels. This tool stores the results of impact assessment and shows the map utilizing the GIS functions.

AIM impact team has been greatly contributing to Japanese local government and the process of development of Japanese National Adaptation Plan.