

ADAP-T for water-related adaptation to climate change and supporting its policy making

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The anthropogenic climate change is increasing water-related disaster risks such as flood and drought, in particular, because most of the adverse impacts of climate change is delivered to society through water. Mitigation efforts to reduce the greenhouse gas, e.g., CO₂, emission and to reduce the speed of climate change are essentially important, and at the same time, adaptation measures to reduce the vulnerability and exposure of human lives and properties from risks exacerbated by climate change are also relevant. After the Paris Agreement of UNFCCC in 2015, all the member states are encouraged to set their National Adaptation Plan (NAP).

The formulation of “Thailand’s National Adaptation Plan” is being led by the Office of Natural Resources and Environmental Policy and Planning (ONEP) under Ministry of Natural Resources and Environment (MONRE) as a plan for the implementation of adaptation measures by each ministry and agency. For supporting the NAP formulation and development of climate change measures that contribute to a resilient and sustainable society, a new research project entitled "Advancing co-design of integrated strategies with adaptation to climate change in Thailand (ADAP-T)" with international collaboration between Thailand and Japan was proposed, approved, and implemented since 2016, supported by JICA for Thai side and JST for Japanese side under the framework of SATREPS. ADAP-T has three pillars of research, namely i) Knowledgebase of climate change, ii) Adaptation measures to climate change, and iii) Co-designing adaptation measures. Disciplines relevant for the major sectors prone to climate change, such as riverine hydrology, forest hydrology, sediment erosion, coastal erosion, urban hydrology, and agricultural hydrology are collaborating under ADAP-T, and Kasetsart University, Thai Meteorological Department, Royal Irrigation Department, and ONEP are managing the ADAP-T project in Thailand with close communication with The University of Tokyo and member researchers.

These research results have been contributed to the formulation of NAP, which was compiled and published as ADAP-T Special Report 2018 “Scientific Report: Climate Change Effects and Adaptation Measures on Water related Sectors in Thailand” in April 2018. Moreover, these results are summarized and developed as a web-based adaptation simulator as a tool to assist policy makers considering policy priorities.

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