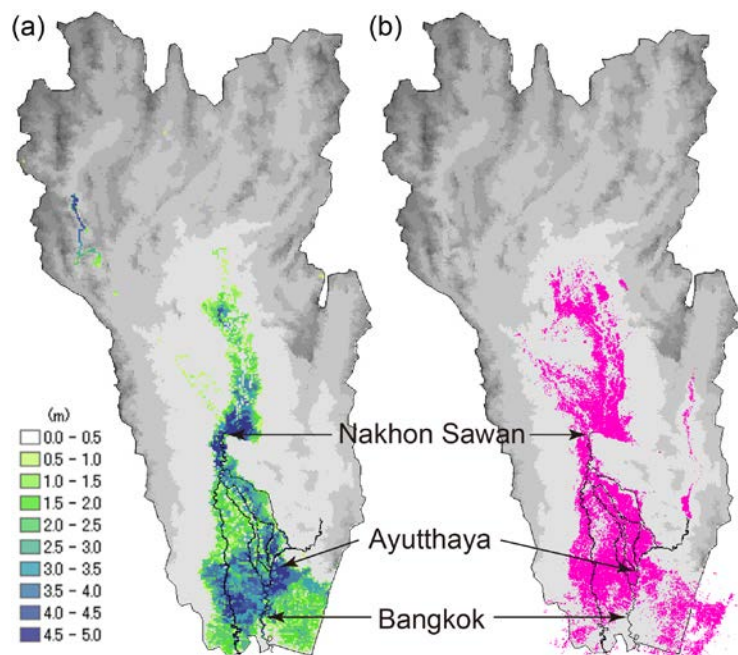


2011 Thai Flood simulation

From July to November in 2011, a large-scale flood occurred in the Chao Phraya River basin of Thailand, causing tremendous damage to livelihood, businesses, and farming of local people. In mid-October, ICHARM started flood simulation with the Rainfall-Runoff-Inundation (RRI) model as part of emergency response in order to understand the prospective development of the flood in the basin. With the RRI model, it is possible to predict the progress of a flood, holistically considering the effects of discharge and inundation. In the case of simulation during emergency response, topographical information and estimated rainfall supplied by satellites are often used for simulation, because real-time local information is hardly available during a disaster. The Thai flood was simulated for the extent and duration of inundation by using estimated rainfall as input data. Part of the results were released to the public in a press conference held jointly with MLIT, and also provided to governmental agencies and media organizations, which drew a lot of media and public attention to ICHARM and the new technology.

In response to this huge flood, JICA decided to provide assistance for the Thai government through the “Project on a Comprehensive Flood Management Plan for the Chao Phraya River Basin.” ICHARM supported this effort by offering technical advice as a member of the advisory committee formed within Japan for this project.



Inundation extent in the Chao Phraya River basin estimated (a) by the emergency response-type simulation and (b) by satellite remote sensing (provided by UNOSAT) for 2011 Thailand Flooding as of October 13, 2011