

Sustainable and resilient social system for healthy nature

Implementation of long-term flood prediction by integrating satellite observation and model simulation: Realization of a society that does not let floods become disasters

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Summary :

First, we aim to establish an unprecedented global, ultra-high-resolution flood forecasting system (approximately 30 m resolution in Japan and 90 m resolution in other areas) that can be used more than 72 hours in advance. This will be done by making full use of data assimilation of various observation information and knowledge, including not only local observations and satellite data but also SNS data. Second, an information fusion infrastructure will be established to customize and disseminate the forecasts. It provides timely and appropriate early flood warning information necessary for individual evacuation actions, evacuation assistance by local governments, and damage prevention and mitigation measures. Third, the project will formulate flood control plans that incorporate flood forecast information, which has not been fully utilized in the past, and contribute to the formulation of medium- to long-term flood control and land planning by the national and local governments and business continuity planning by companies. Through the above, we will contribute to the realization of a "society that does not let floods become disasters," where floods are relaxed, and everyone can actively make decisions and take action to prevent disasters.

Yoshimura Lab. HP: <https://isotope.iis.u-tokyo.ac.jp/>

