# Lunch Seminar:

## Introduction of Flood Prediction and Adaptation Research under Japan's National Climate Program (**SENTAN Program**)

Date: 20 February 2023 (ICFM9 Day 2) 12:00-13:00
Venue: EPOCHAL Tsukuba, Room 101
Program:

Chair: Dr Kenichiro KOBAYASHI, Associate Professor, Kobe University

1) Actionable Climate Science in the SENTAN Program
   Dr Izuru TAKAYABU, Japan Meteorological Business Support Center（JMBSC）
2) Flood Prediction Research under the SENTAN Program
   Dr Yasuto TACHIKAWA, Graduate School of Engineering, Kyoto University
3) Future Climate Projection Data Set under a Global Warming, DS2022
   Dr Toshiyuki NAKAEGAWA, Japan Meteorological Business Support Center（JMBSC）
4) Platforms on Water Resilience and Disasters for Social Sustainability
   Dr Hirotada MATSUKI, International Center for Water Hazard and Risk Management (ICHARM)

### MEXT-Program for the Advanced Studies of Climate Change Projection (SENTAN)

Across the planet, there have been numerous extreme weather events and disasters in recent years, and their frequency and severity are projected to increase under climate change. Working Group I contribution to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) (Climate Change 2021: The Physical Science Basis) concluded that it is unequivocal that human influence has warmed the Earth. The report, released in August 2021, is more categorical than its predecessors and highlights the urgent need to address climate change globally and collaboratively. It is therefore important that Japan contributes actively to international efforts, such as the upcoming Seventh Assessment Report (AR7) cycle and the development of the Sustainable Development Goals (SDGs) for 2030, and advance the field of climate change science and technology.

In Japan, various legislations, plans, and activities related to climate change have been put into place. These include the Climate Change Adaptation Act, which came into force in 2018 and diverse practical measures taken by municipalities and private companies. The importance of scientific information as a basis for decision-making is growing; for example there is increasing demand for science-based predictions to support activity planning. However, the practical application of climate change research has remained limited because prediction accuracy and data usability and availability are insufficient to meet the high demand of users. Climate change research needs to be adapted to provide information that can meet the needs of the society.

Thus, in this program, we build on and expand the Integrated Research Program for Advancing Climate Models (2017-2021 FY), and collaborate closely on four study themes under a unified research framework. We aim to improve our understanding of climate change mechanisms, reduce uncertainties, and create highly accurate climate change projections that can be used as the scientific basis for the development of climate change adaptation and mitigation measures. Our goal is to conduct application-oriented research to meet the needs of different users and contribute to the realization of a decarbonized society.

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MEXT MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY-JAPAN