

Yoshimura Laboratory

[Climate System and Water Cycle]

Institute of Industrial Science

Department of Human and Social Systems / Large-scale experiment and advanced-analysis platform

Eng/Department of Civil Engineering

Isotope Meteorology

Front/Department of Natural Environmental Studies

<http://isotope.iis.u-tokyo.ac.jp/>

Y-Lab contribute to the society by understanding of climate and water cycle.

We study the earth from viewpoints of climate, water, and isotopes to make a contribution to understanding of climate system and prevention of water-related disasters.

Where we are

Y-Lab is located in the LEAP of Institute of Industrial Science in Kashiwa campus.



Office

There are some opportunities which Y-lab members can gather and discuss intensively.



Reception Space

Lab members often take a rest and chat with others here.



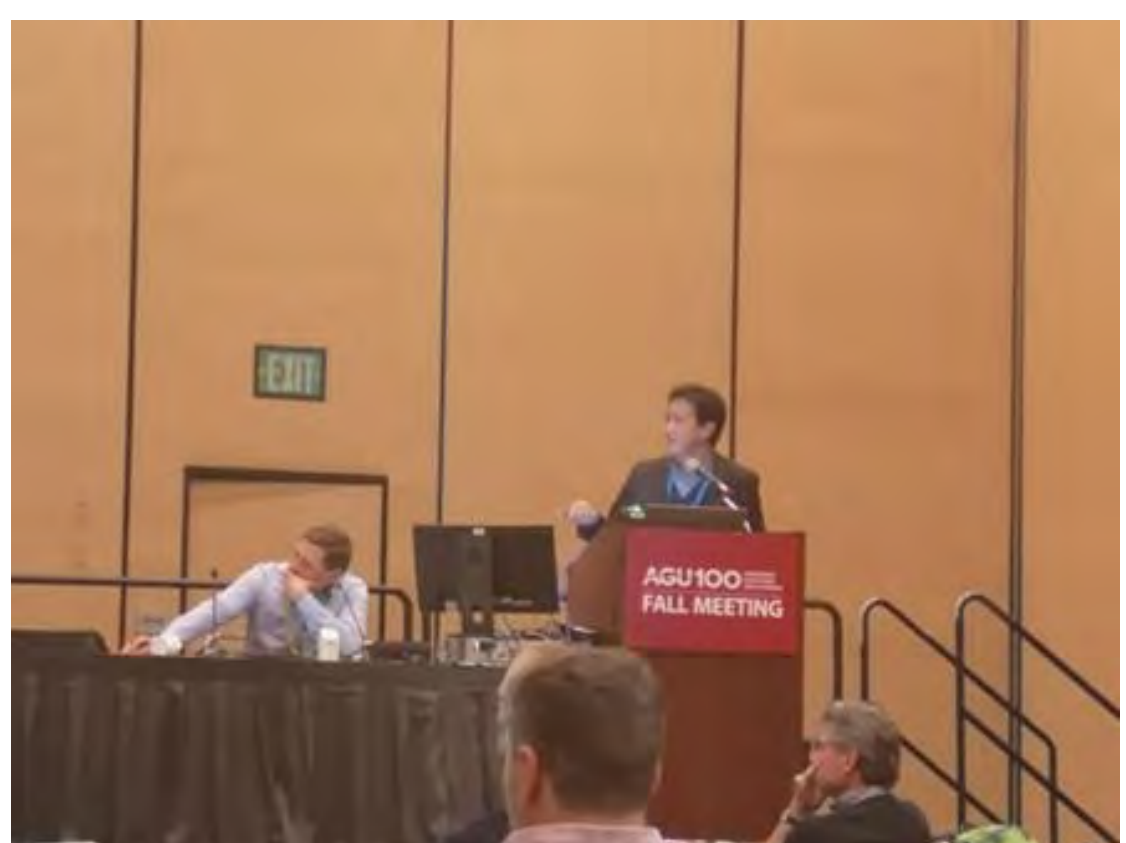
Open Campus

Visualization of water cycle with spherical display helps visitors understand research topics.



Isotope Experiment Room

Y-lab is fully equipped with experimental instruments including mass and laser spectrometers.



Academic Conferences

Y-Lab members actively make presentations at academic conferences and share our results.

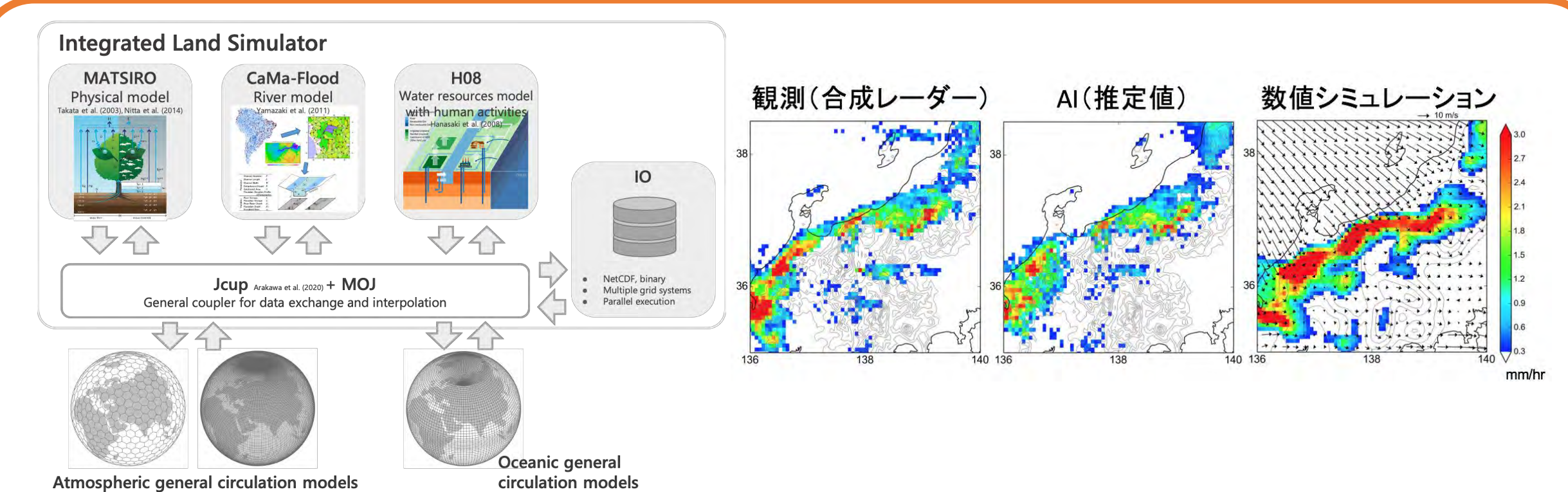


International Members

Members from various countries have lively discussions on their research topics.

What we do

Climate

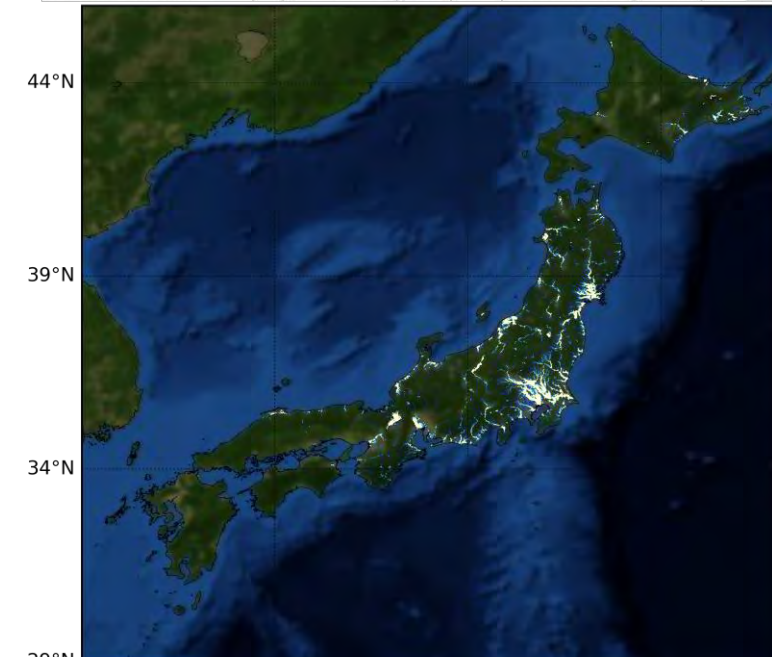


Integrated Land Simulator(ILS) Estimation of local precipitation based on numerical simulation with AI is under development

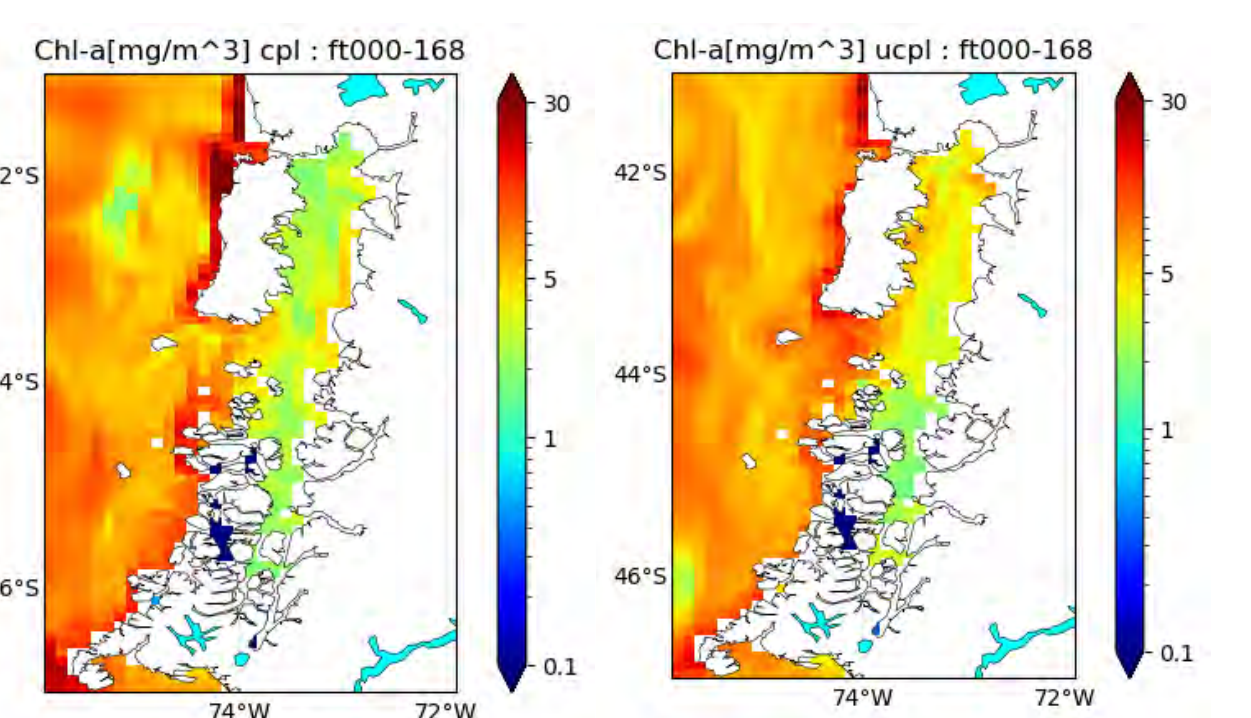
Provision of useful information for climate change through understanding climate system using model development and its application

Water Cycle

Flood Area caused by typhoon Hagibis (2019) estimated by Today's Earth (km²)



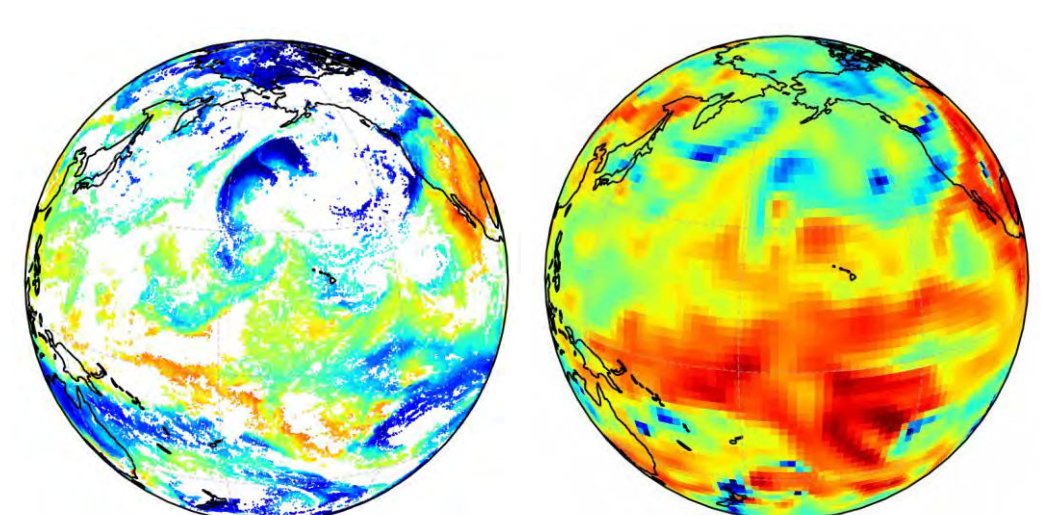
Real-time numerical flood prediction by "Today's Earth" system



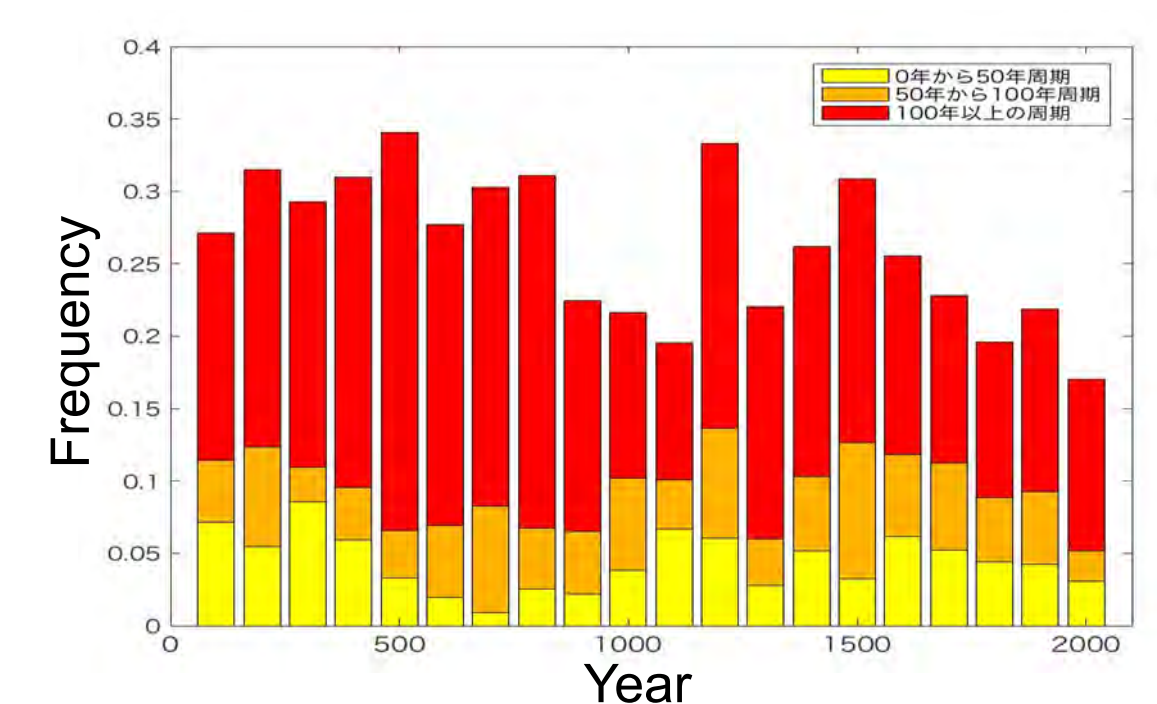
Calculating phytoplankton reproduction using atmosphere-ocean coupled model

Contribution to world water resource management and disaster mitigation through representation and prediction of water cycle based on model development and its application

Isotope



Model simulation of isotopic ratios in water vapor



Reconstructed global climatic frequency using proxy isotope

Development of methods for climate reconstruction and improvement of model accuracy with isotope and seeking better understanding of climate system