

CaMa-Flood developer/user international meeting 2026

10th and 11th September, 2026 (Thursday - Friday)
at ECMWF headquarters in Reading, United Kingdom.

Conference Venue

ECMWF Conference Theater:

Shinfield Park, Reading, RG2 9AX, United Kingdom.

<https://maps.app.goo.gl/ZWofy2wm4t51QYWD6>

Meeting Webpage

<https://global-hydrodynamics.github.io/cmf-meet/>

About the meeting

Over the past 15 years since its initial development, the global river model CaMa-Flood has undergone substantial advancements, evolving into a physically consistent and versatile framework for large-scale river hydrodynamics. Based on the catchment-based macro-scale floodplain (CMF) approach, the model explicitly represents water surface elevation, enabling realistic simulations of river discharge, water level, and floodplain inundation across continental to global scales.

Recent developments have further expanded its capabilities, including the integration of high-accuracy global topography datasets, advances in computational performance (e.g., parallelization and GPU implementations), and the incorporation of new process representations such as levee effects and tracer transport. In parallel, the increasing availability of satellite observations has opened new opportunities for model validation and data assimilation, strengthening the link between simulations and real-world observations. As a result, CaMa-Flood is now widely used in a broad range of applications, including global flood risk assessment, Earth system modelling, real-time hydrological monitoring, and studies of biogeochemical and ecosystem processes.

We are pleased to announce the 2nd international meeting for CaMa-Flood developers and users. This meeting aims to bring together the growing community to exchange knowledge and expertise, share recent scientific and technical advances, and discuss future directions in global river hydrodynamics and its applications. We look forward to a stimulating and productive exchange of ideas and collaborations across different modelling approaches and research communities.

Each talk is 10–15min + 5min Q/A. We have open discussion at the end of each session.

9-Sep Wednesday		<i>pre-meeting, optional</i>		
16:00-18:00	Open Discussion		at a pub in Reding City Centeer	Venue: TBD
18:00-21:00	Ice Breaker		at a pub in Reding City Centeer	Venue: The Rising Sun
Each talk is 10–15min + 5min Q/A. We have open discussion at the end of each session.				
10-Sep Thursday				
8:30-9:00	Registration			
9:00-9:15	Welcome Address	Dai Yamazaki / Michel Wortmann		
9:15-9:30	Welcome Talk	Florian Pappenburger	European Centre for Medium-Range Weather Forecasts (ECMWF)	
9:30-10:40	Session 1	Development and Operations		Chair: Dai Yamazaki
	D1-1-1	Gianpaolo BALSAMO	ECMWF	Enhanced hydrological coupling in the ECMWF Integrated Forecasting System: How modelling irrigation and inundation processes can influence weather forecasting.
	D1-1-2	Dai YAMAZAKI	Institute of Industrial Science, The University of Tokyo	Recent development of CaMa-Flood model since 2024
	D1-1-3	Michel Wortmann	ECMWF	Hurdles and configuration of an operational CaMa-Flood in the ECMWF IFS
		Discussion		
10:40-10:50	Group Photo			
10:50-11:10	Coffee Break			
11:10-12:40	Session 2	Regional Applications		Chair: Toby Mathews
	D1-2-1	Ikuto KAMBE	Weathernews Inc.	Realtime River Flood Forecasting for Southeast Asia using CaMa-Flood
	D1-2-2	Faizal I. W. ROHMAT	Institut Teknologi Bandung	A Preliminary Regional-Scale Feasibility Assessment of CaMa-Flood for Flood Screening and Monitoring Support in Data-Scarce Regions of Indonesia
	D1-2-3	Tobias CONRADT	Potsdam Institute for Climate Impact Research	Progress in the application of CaMa-Flood in the Danube River Basin
	D1-2-4	☆ Nozomi Uemachi	Institute of Industrial Science, The University of Tokyo	Extending CaMa-SED for Robust Continental-Scale Hydro-Sediment-Morphodynamic Modeling
		Discussion		
12:40-14:00	Lunch			
14:00-15:10	Session 3	Biogeochemistry		Chair: Douglas Clark
	D1-3-1	☆ Hong WANG	Institute of Industrial Science, The University of Tokyo	Hydrodynamic Controls on Riverine Carbon Emissions through Floodplain-Explicit Carbon Routing Modelling
	D1-3-2	Sonja Folwell	UK Centre for Ecology and Hydrology	Improving the Representation of Wetland Hydrodynamics and Methane Emissions in the JULES Land Surface Model
	D1-3-3	☆ Leatile Tshabang Modie	Institute of Industrial Science, The University of Tokyo	Wavelet-Based Diagnostic Metrics for A Global Hydrodynamics Model Validation: Application to CaMa-Flood discharge
		Discussion		
15:10-15:30	Coffee Break			
15:30-16:40	Session 4	Land Surface Coupling		Chair: Sonja Folwell
	D1-4-1	Leslie Enrique Salomon ALVÁN ENCINAS	universidad nacional agraria la molina	High-Resolution Hydrodynamic Modeling (CaMa-Flood v4.30) for the Identification of Backwater Zones and Sediment Traps in the Marañón, Pastaza and Nanay Basins (Loreto, Peru)
	D1-4-2	Hashmi Fatima	National Centre for Medium Range Weather Forecasting (NCMRWF)	Preliminary experiments with Cama-flood using Mithuna couple model data over Indian region
	D1-4-3	Toby Marthews	UK Centre for Ecology & Hydrology	A workflow for land-ocean interaction: river outflows and coastal inundation
		Discussion		
16:40-18:30	Poster Session	see Posters sheet		
17:10-18:30	Reception	light meal and drinks		

☆ : Early Career Scientist / Student

11-Sep Friday				
9:00-9:20	Registration			
9:20-10:30	Session 5	Computational Advances		Chair: Michel Wortman
	D2-1-1 ☆ Prakat MODI	<i>SIT Research Laboratories, Shibaura Institute of Technology, Japan</i>		Impact of Spatial Resolution on Large-scale Hydrodynamic Model Simulation and Physics
	D2-1-2 ☆ Shengyu Kang	<i>Wuhan University</i>		CaMa-Flood-GPU: A GPU-based hydrodynamic model implementation for scalable global simulations
	D2-1-3 ☆ Hancheng Ren	<i>Beijing Normal University</i>		GraphRiverCast: A Topology-Informed AI River Model for Global River Hydrodynamics
		Discussion		
10:30-10:50	Coffee Break			
10:50-12:00	Session 6	Satellite Integrations		Chair: Prakat Modi
	D2-2-1 ☆ Xiaoyu Sun	<i>Institute of Industrial Science, The University of Tokyo</i>		Calibration of Effective Channel Depth in the CaMa-Flood Model Using SWOT Observations
	D2-2-2 ☆ Do Ngoc KHANH	<i>Shibaura Institute of Technology</i>		A global levee database derived from high resolution digital elevation models
	D2-2-3 ☆ Yukinori KOJIMA	<i>Institute of Industrial Science, The University of Tokyo</i>		Bias-corrected Two-step Assimilation of Satellite Water Surface Elevation and Discharge for Large-scale River Reanalysis
		Discussion		
12:00 - 12:20	Discussion 1	Model Management		
12:20-13:30	Lunch			
13:30-14:40	Session 7	Data Infrastructure		Chair: Rezuatul Islam FAHIM
	D2-3-1 Xudong Zhou	<i>Ningbo University</i>		A Digital Hydrosphere Database Framework Based on Sub-basin Units, AI Agents, and Crowdsourcing
	D2-3-2 ☆ Jiachao CHEN	<i>Institute of Industrial Science, The University of Tokyo</i>		Development of a Global High-Resolution Runoff Dataset Based on NEX-GDDP-CMIP6
	D2-3-3 Gurpreet DASS	<i>European Centre for Medium-Range Weather Forecasts</i>		Modelling river flow in south-eastern Africa under warmer climate conditions using ecLand and CaMa-Flood.
		Discussion		
14:30-14:50	Coffee Break			
14:50-16:00	Session 8	Flood Risk		Chair: Faizal I. W. ROHMAT
	D2-4-1 ☆ Gang Zhao	<i>Science Tokyo</i>		New Insights Into Global Flood Hazard and Risk Considering Levees
	D2-4-2 ☆ Muhammad Hasnain Aslam (video)	<i>Gaia Vision Inc</i>		Flood Volume Allocation for High-Resolution Flood Hazard Mapping Using CaMa-Flood with Levee Representation
	D2-4-3 ☆ Md. Rezuatul Islam FAHIM	<i>Institute of Industrial Science, The University of Tokyo</i>		Objective Identification of Physically Plausible Worst-Case Scenarios from Large-Ensemble Tropical Cyclone Forecasts
16:00-16:30	Discussion 2	Future Directions	Vote for awarding / next meeting	
16:30-16:50	Closing	awarding and closing remark		

Poster	Day-1: 16:40-18:30	A0 size portrait poster (84cm * 110cm)
P01 Shima Azimi	<i>Aalborg University</i>	Space- and Model-Based Estimation of the Hydrological Water Cycle in the Niger River Catchment
P02 Jayaraju Nadimikeri	<i>Yogi Vemana University, INDIA</i>	Flood mapping and Assessment using Sentinel-1A SAR Data on Phython, AP, India: Environmental Sustainability
☆ P03 Odalys Jacobo Rodriguez	<i>Institute of Industrial Science, The University of Tokyo</i>	Localizing Global Flood Models: Toward Locally Accurate Inundation Extent and Water Level Simulation.
☆ P04 ZHANG YUANZHE	<i>Institute of Industrial Science, The University of Tokyo</i>	Toward Differentiable Land–River Hydrological Modelling through MATSIRO
☆ P05 Shahriar Md Wasif	<i>Institute of Industrial Science, The University of Tokyo</i>	Satellite-Based Monitoring of Seasonal Flood Connectivity in Haor Wetlands of Northeastern Bangladesh
P06 Megumi WATANABE	<i>Paris Observatory</i>	Communicating ensemble flood forecasts with municipal officials in large
☆ P07 Shugao XU	<i>GFZ, Germany</i>	more frequent extreme floods revealed by observation-constrained projections
☆ P08 Siyuan Huang	<i>Institute of Industrial Science, The University of Tokyo</i>	Assessing River-Floodplain Water Exchange Using Satellite-Observed Temperature
☆ : Early Career Scientist / Student		

How to join the event

From Reading city centre to ECMWF:

The easiest option is to take Reading Buses route 3 (Leopard 3) towards Shinfield / Arborfield / Wokingham. Get off at “Shinfield Park, Weather Centre”, which is right next to the ECMWF headquarters. You can board the bus near Reading Station / the town centre.

Tickets can be bought on the bus using contactless payment or cash.

Registration workflow at ECMWF

1. At the security gate, tell the guard your name and affiliation as registered for the meeting. If your name is on the participant list, they will let you in.
2. Pick up your conference badge and lunch token at the front desk.
3. Then go upstairs to the Theatre, where the meeting will be held. Coffee and tea will be available there.

Local organizing committee

- Dai Yamazaki (Chair, UTokyo)
- Michel Wortmann (Logistics, ECMWF)
- Jiachao Chen (Program: UTokyo)
- Minako Yokoyama (Secretary, UTokyo)
- Yuki Tsukada (Secretary, UTokyo)

Acknowledgement

CaMa-Flood developer/user meeting 2026 is co-organized by

- Yamazaki Lab (Global Hydrodynamics Lab)
- Institute of Industrial Science, The University of Tokyo
- ECMWF (European Center for Medium-Range Weather Forecast)

The meeting is mainly supported by

- KAJIMA Foundation, International Joint Research Grant

And co-supported by:

- JSPS KAKENHI: Kiban-A “Timing of Emergence of Flood Risk under Climate Change “ [26H02154]
- JSPS KAKENHI: Gakujutu Henkaku-A “Macro-coastal Oceanography” [22A402]
- MEXT SENTAN program for climate change projection [JPMXD0722680395]
- The Foundation for the Promotion of Industrial Science [RC98: Flood Risk Research]