Ahead of the Flood
JRC and ECMWF: 25 years of collaboration

2000 — European Flood Forecasting System
The JRC, European MS and ECMWF start the EFFS project to develop a prototype flood forecasting system at medium-range

2002 — Devastating floods strike Europe
The European Commission calls for early cross-border warnings to save lives
Source: Wikipedia

2003 — EFFS runs as prototype at the JRC
EFFS produces forecasts across Europe forced by DWD Det forecasts and based on the distributed hydrological model LISFLOOD

2004 2005 — IFS-ENS input to EFAS
EFFS becomes EFAS and a collaboration agreement is signed between the JRC and ECMWF to have IFS-ENS as input to EFAS

2011 — ECMWF becomes COMP
ECMWF is awarded the 1st CEMS-Hydro Computational Centre Framework Contract (2012-2017)

Computational centre (COMP) — Analytics and Dissemination centre (DISS) — Hydro data collection centre (HYDRO) — Meteo data collection centre (METEO)
ECMWF — SMHI — GHENOVA DIGITAL — DWD KISTERS

2011 2012 — ECMWF and the JRC develop a GloFAS prototype
ECMWF and the JRC develop a prototype of the Global Flood Awareness System, based on IFS/HTESSEL and LISFLOOD routing

2012 — EFAS becomes fully operational at ECMWF
EFAS becomes fully operational under the Emergency Management Service (EMS) of the Copernicus Programme, run by the European Commission.

2014 2015 — GloFAS becomes pre-operational at ECMWF
GloFAS is run daily at ECMWF becoming the first global hydrological ensemble forecasting system

2017 2021 — ECMWF is awarded the 2nd CEMS-Hydro Computational Centre Framework Contract (2017-2021)
GloFAS becomes operational as part of CEMS-Flood
Global and European hydrological datasets are made openly available on the CDS supporting hydrological research

2020 — EFAS contributes to C3S Climate Intelligence
EFAS River discharge is included in the C3S European State of the Climate (ESoTC)

2021 2027 — ECMWF is awarded the 3rd CEMS-Hydro Computational Centre Framework Contract (2021-2027)
LISFLOOD replaces HTESSEL in GloFAS
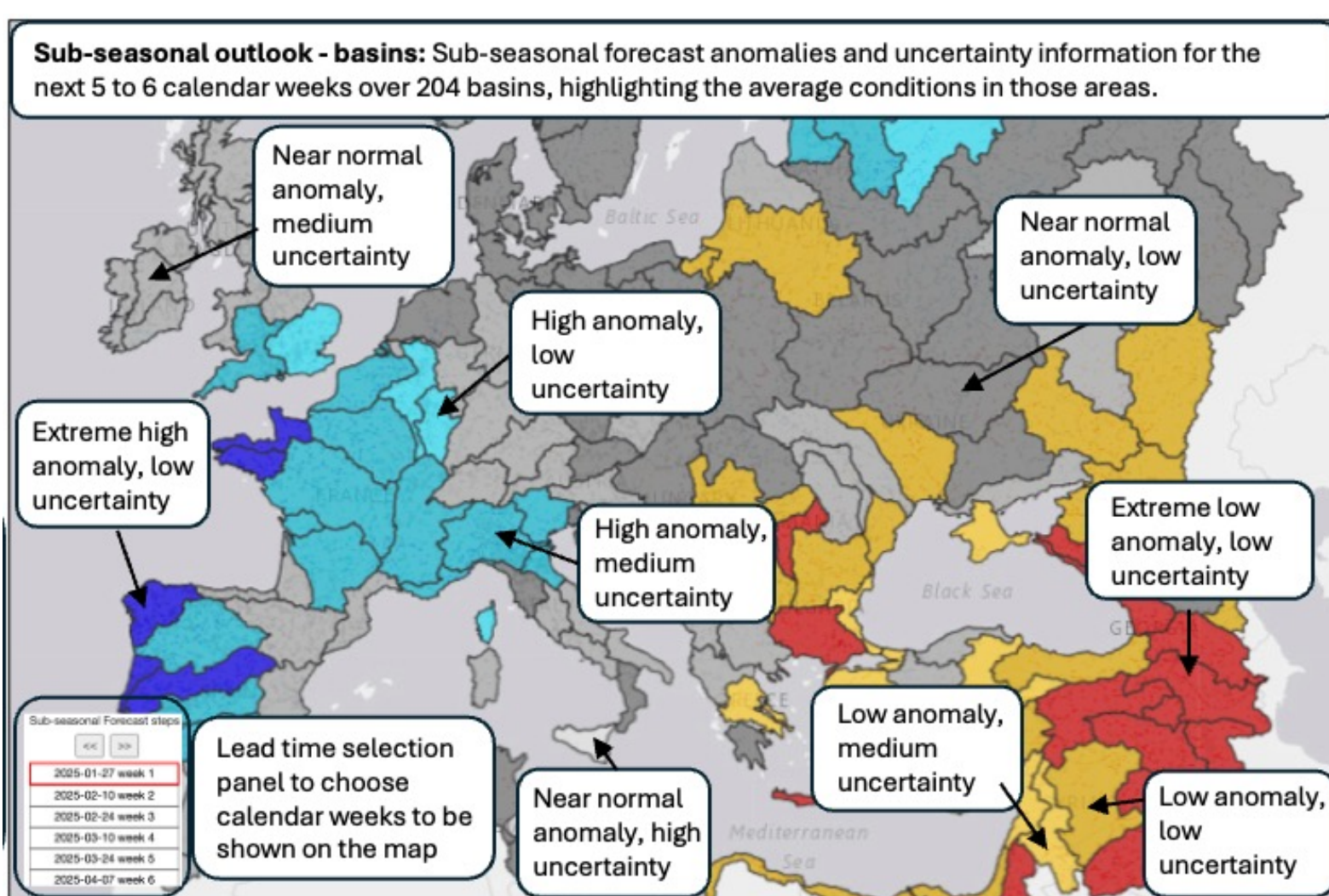CEMS-Hydro seasonal forecasts become part of C3S Hydro Multi-model ensemble

2023 — Spatial resolution increases at the European and global scales
EFAS resolution is increased from 5km to 1 arcmin (~1.5 km)
GloFAS resolution is increased from 0.05° to 3 arcmin (~5 km)

2024 — Dedicated Early Warning Data Store (EWDS)
CEMS-Flood and CEMS-Fire data are made available via the new EWDS supported by ECMWF

2025 — AIFS input to EFAS and GloFAS
AIFS Single is used as a meteorological forcing in EFAS and GloFAS, increasing the inclusion of meteorological uncertainty and making GloFAS a multi-model system

2025 — Revamped hydrological outlook products
Seasonal and sub-seasonal hydrological outlook products are redesigned to give users earlier information on hydrological anomalies

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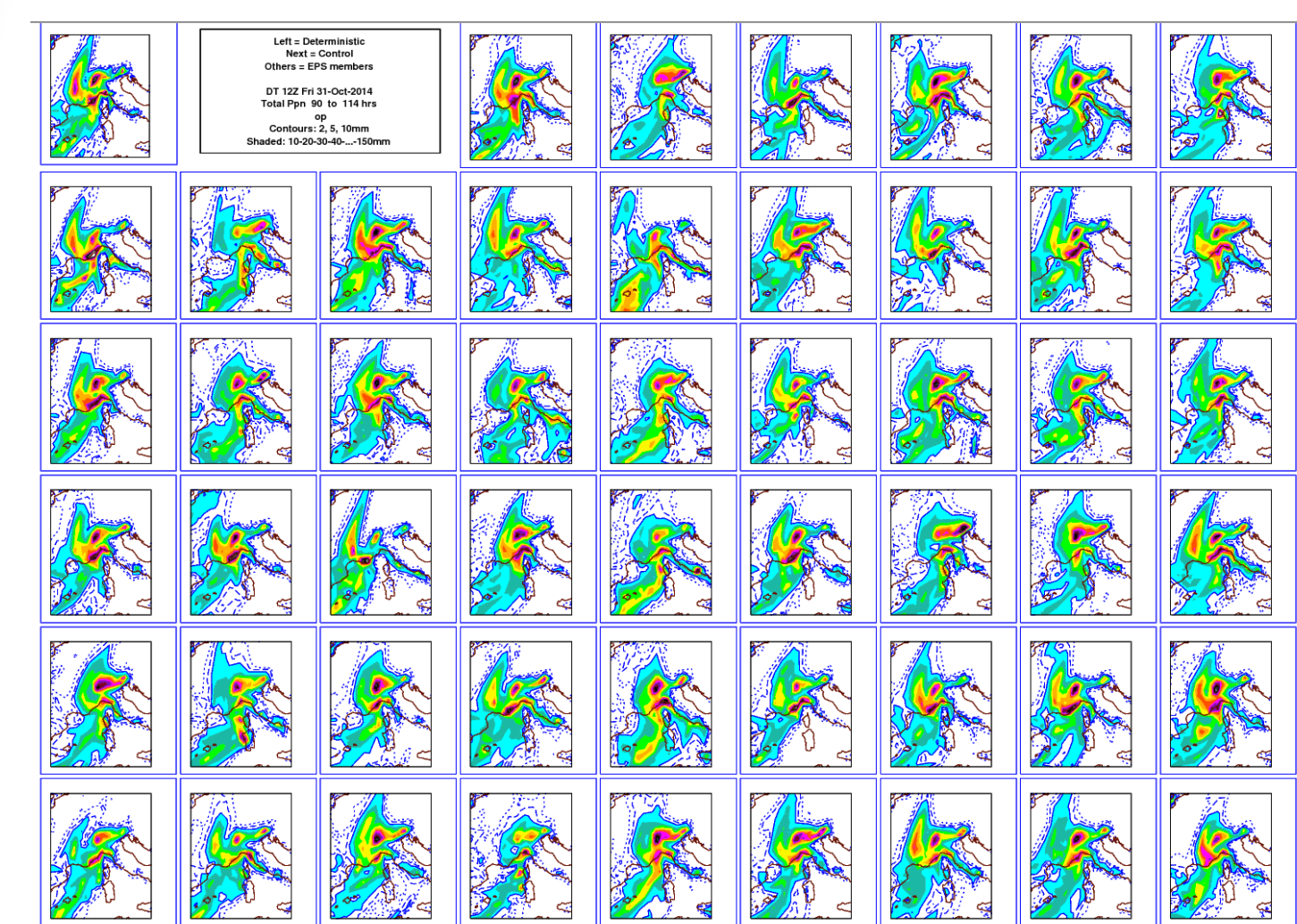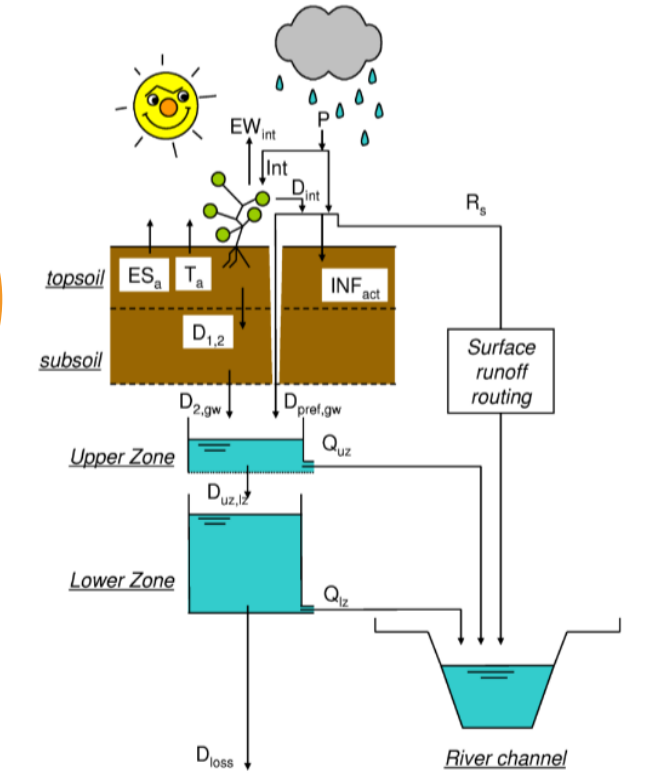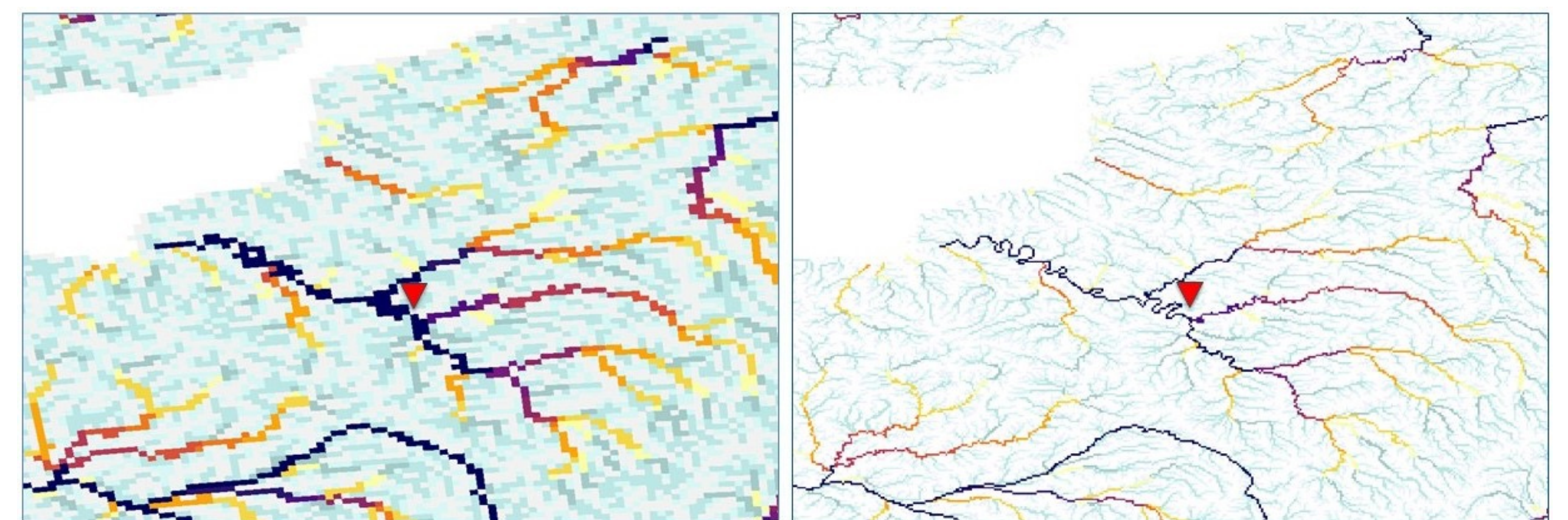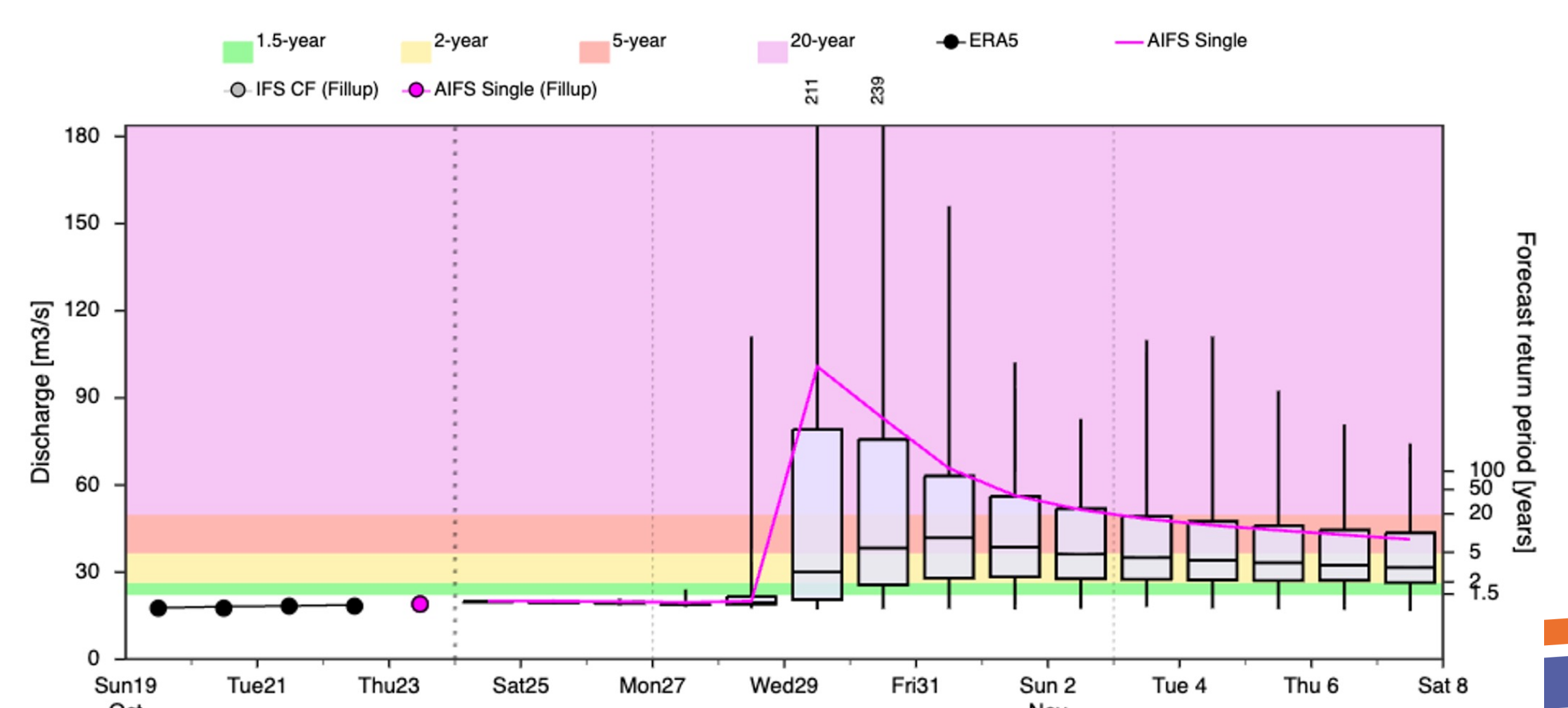## Over two decades of collaboration between the JRC and ECMWF has improved flood Early Warnings for All

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