

Understanding Risk Balkans Conference

Transboundary Sava River Cruise with Views on Successful Multi-Hazard Early Warning Advisory System

South-East European Multi-Hazard Early Warning Advisory System (SEE-MHEWS-A)

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WMO OMM

World Meteorological Organization
Organisation météorologique mondiale

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SOUTH-EAST EUROPEAN MULTI-HAZARD EARLY WARNING ADVISORY SYSTEM (SEE-MHEWS-A)

SEE-MHEWS-A aims to:

- Support the NMHSs in fulfilling their core function for providing timely and accurate warnings of hazardous weather events in order to reduce loss of lives and other impacts on people, infrastructure and industry.
- Provide operational forecasters with effective tools for forecasting hazardous weather and hydrological events and their possible impacts to improve the accuracy of early warnings and ensure early actions to support hazard-related decision-making by national authorities and others.
- Function as a cooperative platform where forecasters from different countries will work together on the identification of potential hazards and their impacts, especially when impending weather hazards may have potential impacts in several countries, including their cross-border areas.



SEE-MHEWS-A PROJECT PHASE I

Supported by USAID (580,000 USD) in 2016-2018

Major achievements:

- Detailed Implementation Plan developed providing guidelines for development of the technical part of the system and for all activities necessary to establish advisory system operations by mid-2023. Plan considers the governance structure and other management aspects of the project implementation.
- Statement of NMHSs Directors of SEE region on joint collaboration towards the implementation of activities and projects leading to full operation of SEE-MHEWS-A.
- RA VI Session Resolution 3.1(4)/2 (RA VI-17) on SEE-MHEWS-A collaboration.
- Improved data exchange: Ukraine-ECMWF-WMO agreement on data exchange from more than 160 stations.

Participating meteorological and hydrological services during the 1st Phase:

- Albania, Bosnia and Herzegovina, Croatia, Montenegro, Kosovo (UNSCR 1244/99), the former Yugoslav Republic of Macedonia, Serbia, Turkey, Slovenia, Bulgaria, Greece, Cyprus, Hungary, Romania, Moldova, Ukraine, Israel, Jordan and Lebanon.
- Implementation Plan was developed as a joint effort between WMO, NMHSs of the region, and numerous collaborators, including WMO Regional Specialized Meteorological Centers, research institutions, numerical weather prediction consortia, and European and US meteorological and/or hydrological services.



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SEE-MHEWS-A PROJECT PHASE II

Supported by World Bank, 1 500 000 USD (GFDRR), 320 000 USD (IPA) in 2018-2020

Phase II of the SEE-MHEWS-A Project is a demonstration phase aiming to:

- Improve the availability of hydrological and meteorological data for flood forecasting and regional data sharing (cross-border river catchments).
- Consolidation of and improved real-time access to regional hydrometeorological information and forecasts critical for early warning for all involved countries.
- Improved basin-level (cross-border) flood forecasting, including real-time ingestion of meteorological data and forecasts.

Activities of the phase II of the SEE-MHEWS-A Project:

- Development of the pilot operational hydrological modelling system for selected transboundary river catchment(s) in the region as the basis for development of the comprehensive regional advisory system including:
 - Setting up an operational database and archiving software on an ICT platform.
 - Existing operational limited area numerical weather prediction models will be run in quasi-operational mode, nested in selected global weather prediction models to provide for so called poor man's ensemble forecasts.
 - Connection of high-resolution numerical model outputs to hydrological models at the basin level to provide strengthened flood forecasting capacities for the selected river catchment(s).



Cloud provider

Centralized
Observational
Database (CODB)

Global Models
(ECMWF,GFS,NMMB,ICON)

Reg. Hydrological
Models
(EFAS,E-HYPE,HYPROM,
FFGS)

Nested A
(COSMO-EU/
ICON-EU)

Nested B
(ALADIN)

Nested C
(NMMB)

Reg. Marine Models
(CMCC models, Wave,
Tide, Storm surge
models)

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SEE-MHEWS-A Common Information Platform (CIP)

MET
(Products)

HYDRO
(Products)

NOWCASTING
(Products)

Assimilation

Verification

WEB SERVICES
& TOOLS
(Dissemination,
Visualisation,
interactive tools,
software)

MARINE
(Products)

Data &
Products
(Catalogue)

WARNINGS
(Exchange)

F/COMMS
(Forecasters)

Project participants
(Met., Hydro., Hydro-Met. Services,
Water Authorities)

Products, Data & Comms

Ntl. users

Contributing stakeholders

NWP Consortia

WMO Regional Centers
& Programmes

COPERNICUS
(CMEMS, CAMS,
EFAS, EFFIS,
C3S)

ECMWF

EUMETNET

EUMETSAT

Research Inst.
(ESSL, CMCC)

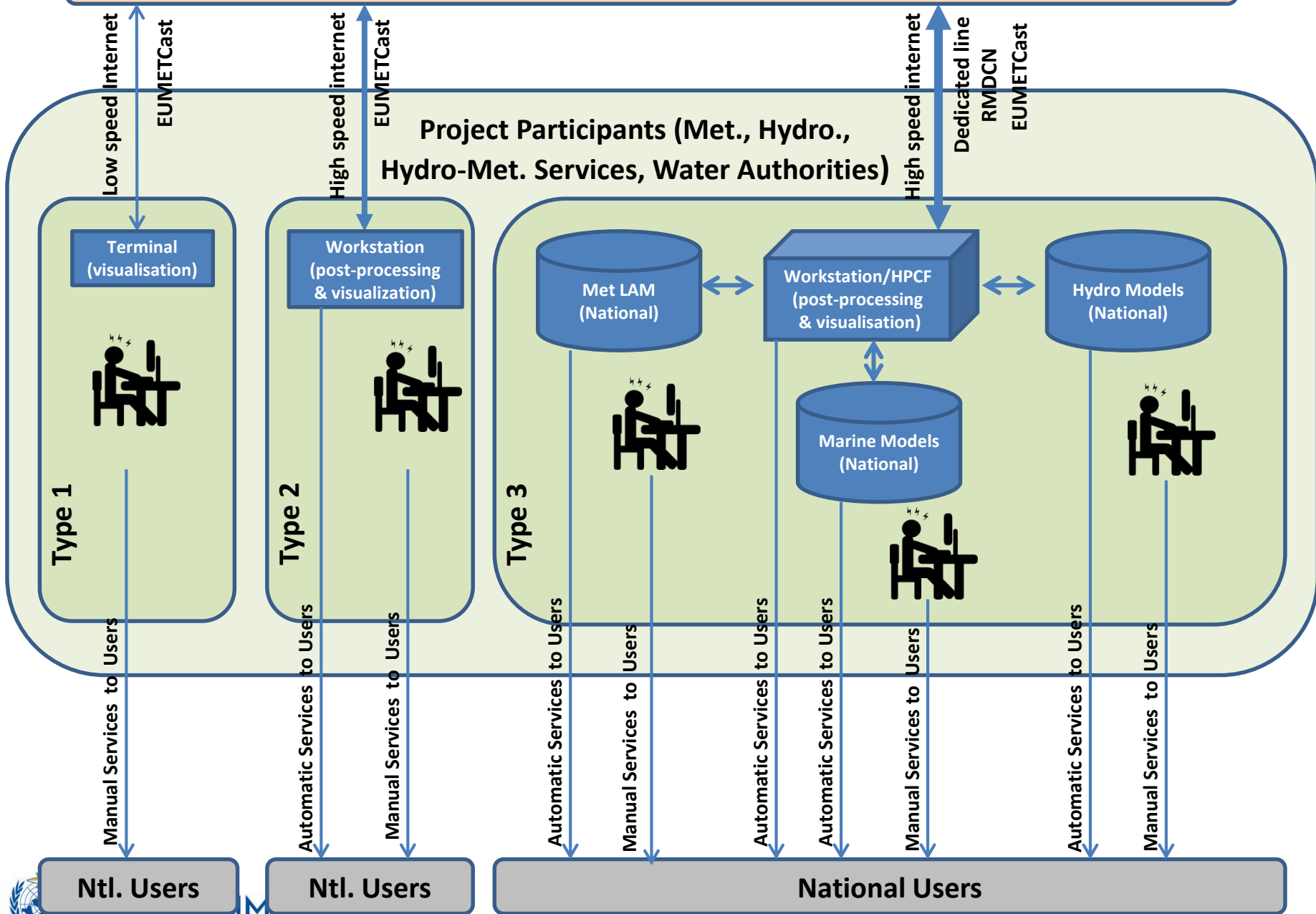
Intl. River Comm.
(Sava, Danube)

NMHSs

Others



SEE-MHEWS-A Common Information Platform



Why and How?

SEE-MHEWS-A and regional cooperation

WHY

- Urgent need for providing best possible information related to hazards to protect lives and livelihoods.
- Shared resources enable achieving more with less costs.
- Wider access to better technologies and products.
- Pooling of expertise, making use of partners know-how.
- Access to more diverse funding mechanisms.
- Possibilities for fast utilization of existing capacities for the benefit of the region.

HOW

- Shared vision and realization of the needs.
- Willingness and commitment for long term collaboration.
- High level institutional and political interest and commitment.
- Equal partnerships and trust.
- Clear definition of roles and responsibilities.
- Technical or political issues not stopping the progress.
- Looking towards the future, following the current development trends e.g. open data policies.



Thank you



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<https://public.wmo.int/en/projects/see-mhews-a>