SCEWERO

Funded by the European Union

SCEWERO

STRENGTHENING THE RESEARCH CAPACITIES FOR EXTREME WEATHER EVENTS IN ROMANIA

GA 101149597

Training on AI for Climate Extremes

Program

25-26 JUNE 2026

CLUJ-NAPOCA, ROMANIA

UNIVERSITATEA BABEȘ-BOLYAI

cmcc Centro Euro-Mediterraneo sui Cambiamenti Climatici

Universiteit Antwerpen

indeco soft

Day 1

Thursday, 25 June 2026

9:00 – 9:30 ~ Registration and welcome coffee

9:30 – 10:30 ~ ML for Heatwaves

Detecting and forecasting heatwaves, and detecting their drivers

Lecturer Ronan McAdam

10:30 – 11:00 ~ Tea & Coffee Break

11:00 -13:00 ~ ML for Heatwaves: Hands-on

Dimensionality reduction of predictors, introduction to ML models

Lecturer Ronan McAdam & Antonello Squintu & Eugenio Fella

13:00 – 14:30 ~ Lunch Break

14:30 – 15:00 ~ ML for Intense Precipitation – Extreme Precipitation intro

Forecasting intense precipitation through identification of its drivers

Lecturer Eugenio Fella

15:00 – 16:30 ~ ML for Intense Precipitation: Hands-on

Precipitation ½ h hands on + 1h discussion

Selection of drivers and forecasting through ML models

Lecturer Eugenio Fella & Antonello Squintu & Ronan McAdam

Day 2

Friday 26 June 2026

9:30 - 10:30 ~ Introduction to the detection of drought events

Parametric and non-parametric indices for drought detection.

Lecturer Elena Xoplaki & Isidoros Iakovidis

10:30 11:00 ~ Tea & Coffee Break

11:00 -13:00 ~ Hands-on drought events

Hands-on estimating indices for drought events.

Lecturer Elena Xoplaki & Isidoros Iakovidis

13:00 - 14:30 ~ Lunch Break

14:30 - 15:00 ~ Statistical downscaling using machine learning techniques

Using the Empirical Quantile Mapping to extend seasonal forecast applications to the local scale

Lecturer Leonardo Aragão

15:00 - 16:00 ~ Statistical downscaling using machine learning techniques

Hands-on Downscaling & Discussion on ML methods

Using k-Nearest Neighbours to extend seasonal forecast applications to the local scale

Lecturer Leonardo Aragão

16:00 ~ Closing activities