## HELMHOLTZ

Earth and Environment

### EE meets EP 2025

Helmholtz Earth and Environment meets the European Parliament and Stakeholders in Brussels

Representatives of all seven Helmholtz Earth and Environment Centres and the DLR

# SynCom

Seven Helmholtz Centres are collaborating in the Helmholtz Research Field "Earth and Environment" to gather deep insights into the complex processes that take place on our planet. The researchers of the EEmeetsEP 2025 delegation are enthusiastic about participating in discussions regarding record shattering (weather) extremes and are prepared to play a significant role in dialogues that connect scientific understanding with policy making.

#### Lena Buth

Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI) Sea Ice Physics +49 471 4831 2808 Iena.buth@awi.de

"The Arctic is warming three to four times faster than the rest of the globe – as a result of, and with implications for, the loss of Arctic sea ice. A warmer Arctic increases the frequency and duration of extreme weather events in the mid-latitudes. We argue that the loss of Arctic sea ice amplifies the damage caused by our greenhouse gas emissions."

#### Dr. Daniel Caviedes-Voullième

Forschungszentrum Jülich Institute of Bio- and Geosciences - Agrosphere, Jülich Supercomputing Centre +49 2461614070 d.caviedes.voullieme@fz-juelich.de

"Flash flood occurrence and severity is increasing under climate change. Since it is difficult to adapt infrastructure and populations to minimize exposure, it is essential to provide informative, quantitative, and timely early flood warnings. High resolution flood models are now ready to inform these warning systems."

#### Dr. Aparna Chandrasekar

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"Climate change is a proven reality, supported by extensive scientific evidence. Our priority now must shift from proving its existence to developing innovative tools and strategies that enable rapid and effective responses."







#### Dr. Jannick Fischer

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"The increasing damage from severe convective storms, mainly by hail, warrants a stronger focus on the topic. This includes improving awareness through education, more research funding to improve warnings, and better adaptation policies."

#### Prof. Dr. Christian Geiß

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"The upcoming decades hold unparalleled transformative power in terms of human habitats. An increasing number of natural hazards are meeting an increasing number of exposed and vulnerable populations. We need powerful forecasting strategies based on AI to anticipate future risks and provide means for mitigation."

#### Anna Jegen

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"The majority of the global ocean volume lies below 2000 m and thus within the deep ocean, which despite being an important heat and carbon sink, remains chronically understudied and as a consequence oversimplified in most circulation models."

#### Dr. Nivedita Sairam

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"Extreme weather events like floods and droughts not only cause financial losses but also impact the health and wellbeing of vulnerable populations. To address this cascading challenge, we need to integrate public health perspective into climate risk assessment and adaptation strategies."

#### Dr. Jeewanthi Sirisena

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"Ever-increasing climate extremes affect vulnerable communities and the environment in many ways by creating multiple risks. Understanding the behavior of current and future climate extremes and resulting cumulative damages and risk is crucial for planning climate adaptation activities at local and regional levels."









