

Geschäftsführung

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Endorsement of the Flagship candidate project ExtremeEarth (CSA proposal)

To the Coordinator of the ExtremeEarth CSA project proposal

On behalf of *Helmholtz Zentrum Geesthacht, Centre for Materials and Coastal Research* I am expressing my strongest support for the CSA proposal to develop a FET Flagship Project Extreme Earth.

This activity of the climate and earth system science communities to develop a joint FET Flagship candidate project is a most timely and appropriate measure for the future of Europe. It will drastically enhance Europe's capability to predict and monitor environmental extremes and their impacts on society enabled by the imaginative integration of edge and exascale computing and beyond, and the real-time exploitation of pervasive environmental data.

The Helmholtz Zentrum Geesthacht, is strongly involved in research activities with focus on coastal systems and, through its entity the Climate Service Centre Germany-GERICS, in climate services. Coastal regions are among the most rapidly changing environments. More than 40% of the human population live at the coast, exposed to extremes such as storms, floods and sea level rise. At the same time, human activity in the coastal zone increases continuously and exposure and vulnerability to climate risks increase.

Understanding and advancing our ability to predict the frequency of occurrence and intensity of extremes reliably is of paramount importance for efforts to make society more resilient to the environmental impacts of the present and changing climate, and it will allow European governments and businesses to plan more effectively than they are able for current and changing climate risks. ExtremeEarth brings together Earth-system scientists and associated down-stream science and application communities, joining forces with those pushing the envelope in digital technology, to realize in the next five to ten years what seems unfeasible today. ExtremeEarth will greatly enhance our capacity to observe and monitor the state of the Earth, predict extremes, understand their underlying drivers, and characterize their societal impact.



Coastal communities are highly vulnerable to extreme weather conditions, advancing predictive capabilities as proposed by ExtremeEarth is therefore of high relevance for our coastal research and climate service activities. Extreme Earth has a remarkable potential to support society in their efforts to adapt to changing extreme conditions. With our research background in the fields of coastal research and climate services, we see strong links to the aims of the proposed project ExtremeEarth.

Therefore, we strongly support this proposal and we are looking forward to further intense involvement in this joint European activity.

The ExtremeEarth project aims to reflect the views and requirements of scientific, technological and service oriented communities that are included in the project for realizing a step-change enhancement of their capabilities in the future. The representation of these communities will be developed throughout the evolution of ExtremeEarth, from preparatory action to Flagship project, through endorsements, consultations and formal project partnership. The endorsement of the Flagship candidate project ExtremeEarth implies that the endorsing entity supports the scientific, technological and programmatic objectives of ExtremeEarth.

This endorsement does not imply any legal or financial commitments towards the ExtremeEarth project. Support will imply that statements and logos of supporters may be shown on the ExtremeEarth website.

With kind regards

Helmholtz-Zentrum Geesthacht
Centre for Materials and Coastal Research

Prof. Dr. Wolfgang Kaysser

Michael Garß