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Potsdam, 14th February 2018

Endorsement of the Flagship candidate project ExtremeEarth (CSA proposal)

To the Coordinator of the ExtremeEarth CSA project proposal

On behalf of Helmholtz Center Potsdam – GFZ German Research Centre for Geosciences we are expressing our 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 exa-scale computing and beyond, and the real-time exploitation of pervasive environmental data.

The GFZ is strongly involved in research activities with focus on multi-scale earthquake processes modeling, probabilistic ground-shaking prediction, seismic hazard and risk assessment and big data exploration. A further research activity building on the previous mentioned work deals with multi-hazard interaction and cascading effects.

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.

With our research background in the field of Solid Earth, 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,



Prof. Dr. Reinhard Hüttl



Dr. Stefan Schwartz