

To whom it may concern

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LEUVEN 12 December 2017

Endorsement of the Flagship candidate project ExtremeEarth (CSA proposal)

To whom it may concern,

I am writing in my capacity as Rector of University of Leuven to express my strongest support for the proposed CSA proposal to develop a FET Flagship Project Extreme Earth.

With great interests we are following the activities of the geoscience community to develop a joint FET Flagship candidate project on enhancing 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.

KU Leuven has a collaboration agreement with Forschungszentrum Juelich that has already led to strong collaboration in the Earth Sciences through joint projects and publications, such as the SOGLO project, which focuses on the impact of Global Change on soil systems. The complementary expertise of KU Leuven and FZ Juelich in the Earth Science domain provides a strong building ground for further collaboration in the framework of new innovative projects such as FET Flagship Project Extreme Earth.

Extreme natural phenomena – such as floods, droughts, wind storms, earthquakes, volcanoes, tsunamis – and the escalating impact of climate change – such as desertification, ice-sheet and glacier melting, sea-level rise – dramatically affect all sectors of society. Historically, environmental pressure on the human population has reshaped entire civilizations, and there is a need for effective mechanisms dealing with future change and extremes now. 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 fields of evolution of life and earth, environmental dynamics, georesource management and georisk assessment, we see strong links to the aims of the proposed project ExtremeEarth. One of the missions and fields of expertise of the KU Leuven is to conduct research that has an impact on the development of countries in the South. Especially in developing



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countries, the impact of extreme weather conditions on local agricultural production is very large and need to be assessed properly for deriving resilient agricultural production systems that are a corner stone of the development of these countries. As such this project could also address societal issues related with immigration and provide input to European policies supporting the development of African nations. Therefore, I very much welcome and strongly support this proposal.

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.

Yours sincerely,

Luc Sels
Rector