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ExtremeEarth - Letter of Support

The Potsdam Institute for Climate Impact Research (PIK) has an outstanding scientific record on climate and earth system analysis, climate impact assessments, scenario analysis for climate change mitigation and sustainable development, and advanced scientific method development in complex dynamic systems and networks (www.pik-potsdam.de). PIK also has its own high-performance computer for complex model simulations in different scientific disciplines as well as highly demanding integrated assessment studies. In 2012, PIK has initiated the Inter-Sectoral Impact Model Intercomparison Project (ISIMIP, www.isimip.org).

ISIMIP offers a framework for consistently projecting the impacts of climate change across a wide range of affected sectors at global and regional scales. An international network of climate-impact modelers, covering more than 100 different impact models, contributes to a comprehensive and consistent picture of the world under different future climate-change scenarios. In October 2017, this emerging community met for the second Impacts World Conference in Potsdam, with more than 400 participants. PIK is hosting the ISIMIP scientific coordination group.

PIK, together with the emerging ISIMIP network of climate impact modelers, is committed to making an essential contribution to the ExtremeEarth Flagship project for improving Europe's capability to predict and monitor environmental extremes and their impacts on society. As part of the future PIK research strategy, multi-disciplinary modelling of planetary boundaries in connection with management of global commons, like the atmosphere, will require advanced capabilities for high-performance computing and bigdata handling. PIK fully supports the scientific, technological and programmatic objectives of Extreme-Earth, especially Key Objectives 1 and 4.

<u>Key Objective 1: Enable a step-change in our ability to simulate and predict extreme events with weather and climate models:</u> PIK will contribute strong modelling capabilities in regional and global climate models of intermediate complexity to improve the understanding of a range of extreme events. Moreover, PIK has an excellent record of linking climate models to specific impact models in various sectors, which will be a valuable contribution for developing the ExtremeEarth Flagship.

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Prof. Dr. Dr. h.c. H. J. Schelinhuber Director phone: +49-331 288 2502 director@pik-potsdam.de Key Objective 4: Enable a step-change in our ability to link fundamentally new capabilities for simulating and predicting extremes along with their impacts across value chains and render such services accessible to all communities: PIK will contribute its excellent capabilities in modelling and assessment of climate risks for various economic sectors (hydrology and water, food and agriculture, energy, health) and related value chains and services. Moreover, PIK has a unique scientific capacity in integrating climate risks across sectors and assessing climate damages related to overall economic output, macroeconomic growth, and income distribution.

I understand that this Letter of Support does not imply any legal or financial commitments towards the ExtremeEarth project. Support will imply that statements and logos of PIK and the ISIMIP network may be shown on the ExtremeEarth website.

I am looking forward to the joint development of the ExtremeEarth Flagship project in an excellent research consortium.

Sincerely,

Hans Joachim Schellnhuber

Director