

## Centre of excellence for Global Systems Science

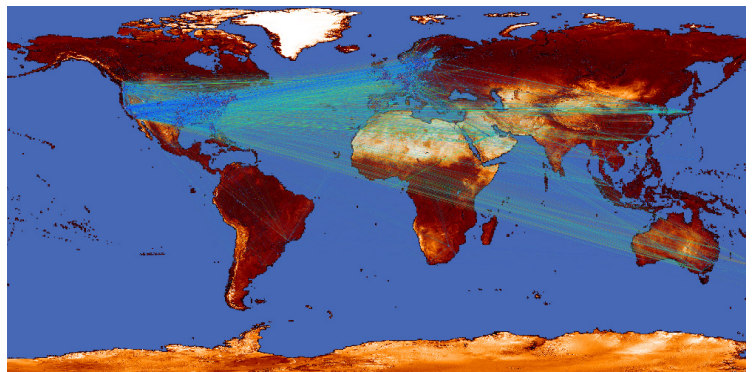
The globalisation of humanity's social and industrial activities, as observed over the past decades, has caused a growing need to address the related global risks and opportunities. The relations and interactions amongst the global population increase day-to-day, so that the following challenges are of utmost importance:

- The **global health risks** – from diabetes to pandemics – caused by the spread of unhealthy social habits offers the opportunity to achieve major global health improvements through healthy behaviour.
- The **global diffusion of green growth initiatives**, including policy initiatives, business strategies and lifestyle changes for successful and inefficient pathways.
- The **challenges of global urbanisation**, with special focus on the impact of infrastructure decisions regarding indicators like congestion, real estate prices and greenhouse gas emissions.

Approaches that address the above-mentioned challenges are investigated by a newly-emerging research area: Global Systems Science (GSS). However, with these transdisciplinary problems the demand for compute performance due to data and processing time constraints increases drastically so that the assistance of High Performance Computing (HPC) is mandatory. Therefore, the main outcomes of the CoeGSS project are the development of the technology and the environment for successful collaboration between the stakeholders dealing with global challenges and the High Performance Computing institutions that provide the mandatory capabilities to address those complex challenges at the required scale.

The project consortium consists of High Performance Computing and Global Systems Science experts from all over Europe:

- University of Potsdam – Germany
- Global Climate Forum – Germany
- University of Stuttgart, HLRS – Germany
- Poznan Supercomputing and Networking Center – Poland
- Institute for Scientific Interchange – Italy
- IMT School for Advanced Studies Lucca – Italy
- Chalmers University of Technology– Sweden
- Atos Spain SA – Spain
- TOP-IX Consortium – Italy
- The CoSMo Company – France
- DIALOGIK – Germany
- CSP s.c.a r.l. – Italy



Further Information:

<http://www.coegss.eu>