



IMPACT2C: Quantifying projected impacts under 2°C warming

D Jacob, L Kotova, and IMPACT2C Team

Climate Service Center (CSC), Hamburg/Helmholtz-Zentrum Geesthacht, Germany (daniela.jacob@hzg.de)

Political discussions on the European goal to limit global warming to 2°C demand, that information is provided to society by the best available science on projected impacts and possible benefits.

The new project IMPACT2C is supported by the European Commission's 7th Framework Programme as a 4 year large-scale integrating project. IMPACT2C is coordinated by the Climate Service Center, Helmholtz-Zentrum Geesthacht.

IMPACT2C enhances knowledge, quantifies climate change impacts, and adopts a clear and logical structure, with climate and impacts modelling, vulnerabilities, risks and economic costs, as well as potential responses, within a pan-European sector based analysis. The project utilises a range of models within a multi-disciplinary international expert team and assesses effects on water, energy, infrastructure, coasts, tourism, forestry, agriculture, ecosystems services, and health and air quality-climate interactions. IMPACT2C introduces key innovations. First, harmonised socio-economic assumptions/scenarios will be used, to ensure that both individual and cross-sector assessments are aligned to the 2°C (1.5°C) scenario for both impacts and adaptation, e.g. in relation to land-use pressures between agriculture and forestry. Second, it has a core theme of uncertainty, and will develop a methodological framework integrating the uncertainties within and across the different sectors, in a consistent way. In so doing, analysis of adaptation responses under uncertainty will be enhanced. Finally, a cross-sectoral perspective is adopted to complement the sector analysis. A number of case studies will be developed for particularly vulnerable areas, subject to multiple impacts (e.g. the Mediterranean), with the focus being on cross-sectoral interactions (e.g. land use competition) and cross-cutting themes (e.g. cities).

The project also assesses climate change impacts in some of the world's most vulnerable regions: Bangladesh, Africa (Nile and Niger basins), and the Maldives.

An overview about the scientific goals and the structure of IMPACT2C will be presented.