

# Web Processing Services for Climate Data - with Examples for Impact Modelers

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Impact modeling forced by climate data is often connected with big data processing, but a frequent problem is that impact modelers are not optimally-equipped with appropriate hardware (computing and storage facilities) nor programming experience for software development. Web Processing Services (WPS) can close this gap and offer impact modelers a valuable practical tool to process and analyze big data. WPS represents an interface to perform processes over the HTTP network protocol, enabling users to trigger processes over a website. The appropriate processes are predefined, together with access to the relevant data archives where appropriate data are stored.

In the case of the WPS we present here, the data archive of the earth system grid federation (ESGF) is connected with a search process and provides access to the climate data archive of the Earth System Grid Federation (ESGF) for CMIP5 and CORDEX data. Furthermore, the WPS we present is conforms with the standardization defined by the Open Spatial Consortium (OGC), allowing combination with WPS from other institutions to establish a network of computing providers. Besides several general processing operations realized with climate operator commands (CDO), a range of specific processes can also be performed within a WPS.

## Wider impact and conclusions

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## URL(s) for further info

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## Description of work

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