

# era5cli The command line tool to download ERA5 data



Jaro Camphuijsen<sup>1</sup>, Ronald van Haren<sup>3</sup>, Yifat Dzigan<sup>1</sup>, Niels Drost<sup>1</sup>, Fakhreh Alidoost<sup>1</sup>, Bouwe Andela<sup>1</sup>, Jerom Aerts<sup>2</sup>, Berend Weel<sup>1</sup>, Rolf Hut<sup>2</sup>, Peter Kalverla<sup>1</sup>

<sup>1</sup>Netherlands eScience Center, Amsterdam, the Netherlands <sup>2</sup>Delft University of Technology, Faculty of Civil Engineering and Geosciences, Delft, the Netherlands <sup>3</sup>Rijkswaterstaat, Utrecht, the Netherlands



## Abstract

With the release of the ERA5 dataset, worldwide high resolution reanalysis data became available with open access for public use. The Copernicus CDS (Climate Data Store) offers two options for accessing the data: a web interface and a Python API. Consequently, automated downloading of the data requires advanced knowledge of Python and a lot of work. To make this process easier, we developed era5cli.

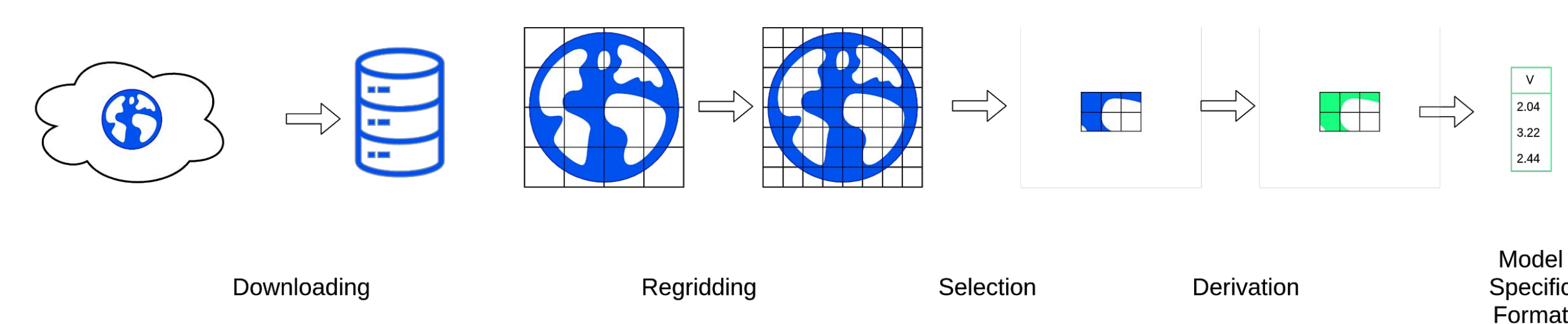
The command line interface tool era5cli enables automated downloading of ERA5 using a single command. All variables and options available in the CDS web form are now available for download in an efficient way. Both the monthly and hourly dataset are supported. Besides automation, era5cli adds several useful functionalities to the download pipeline.

era5cli was developed as the first part of the preprocessing pipeline in the eWaterCycle project.

Source code: [github.com/eWaterCycle/era5cli](https://github.com/eWaterCycle/era5cli)

Documentation: [era5cli.readthedocs.io](https://era5cli.readthedocs.io)

Install now: `pip install era5cli`



*Model specific forcing generation in eWatercycle, with era5cli fulfilling the first part of the pipeline in the case of ERA5.*

## More Info

See more information on our website:

<https://www.ewatercycle.org>

See our code sources at GitHub:

<http://github.com/eWaterCycle>

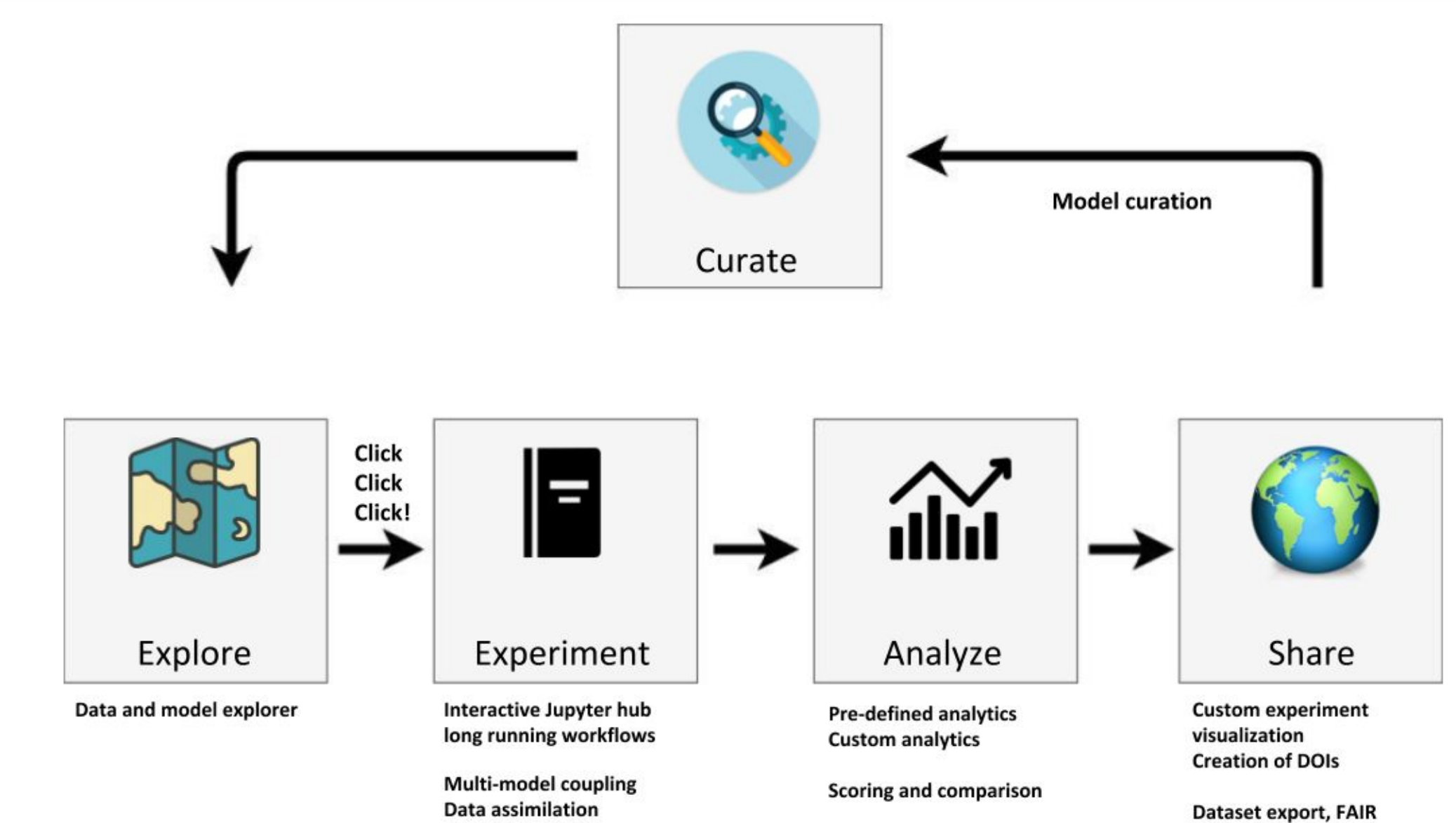
Contact us at:

[ewatercycle@esciencecenter.nl](mailto:ewatercycle@esciencecenter.nl)

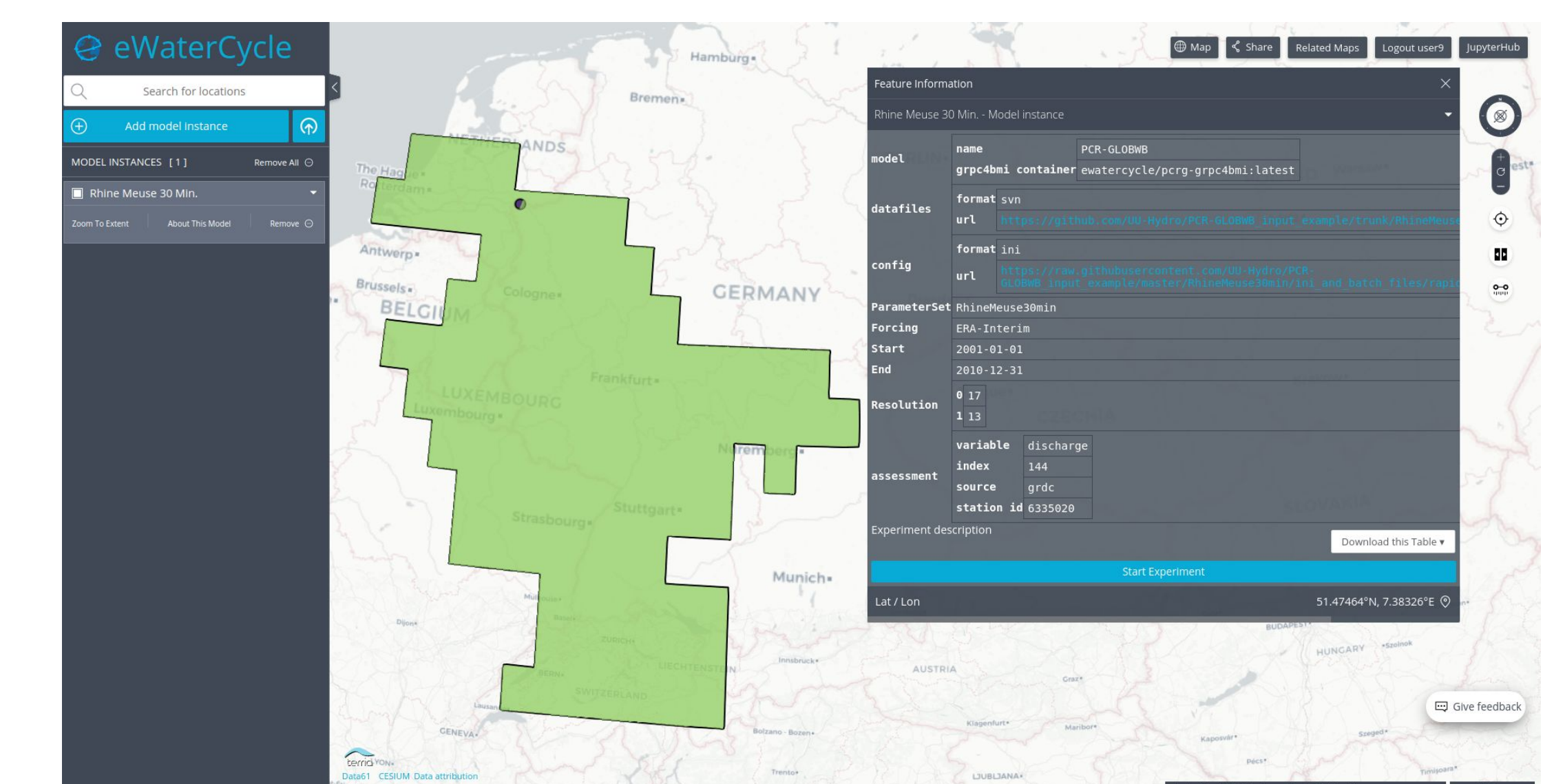
## era5cli options

- download meteorological data in GRIB/NetCDF
- select multiple variables for several months and years
- split outputs by years, producing a separate file for every year instead of merging them in one file
- download multiple files at once
- automatically add history to the netcdf file
- list and retrieve information on available variables and pressure levels

## About eWaterCycle



eWaterCycle is a framework in which hydrological modelers can, compare and analyze the results of models that use different sources of meteorological data. The goal of eWaterCycle is to advance the state of FAIR (Findable, Accessible, Interoperable, and Reusable) and open science in hydrological modeling.



The experiment runs in a Jupyter notebook, the model runs in a container, in any programming language, communicating through grpc4bmi, developed in our team.