



Contributions to Ocean Diagnostics in ESMValTool

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Progress in development of Earth System Models has led to an increased complexity, and with it the need for improved evaluation.

Efforts concentrate on inter model comparison and increasingly process oriented diagnostics and metrics.

In recent years, ESMValTool has emerged as a prime candidate to help with both approaches.

It is a Python based framework that allows for easy application of diagnostics written in various languages, like Python, Ncl, or R, to a number of models in a uniform way.

While it already offers a wide range of diagnostics (see [1, 2, 3]), until recently it has been lacking in the ocean domain.

Here, we present a selection of diagnostics that have been developed at our institute and that are now available for general use within ESMValTool.

[1] Eyring et al., *Geosci. Model Dev.*, 9, 1747-1802, doi:10.5194/gmd-9-1747-2016, 2016.

[2] Lauer et al., *Remote Sensing of Environment*, 203, 9-39, doi: 10.1016/j.rse.2017.01.007, 2017.

[3] <https://github.com/ESMValGroup/ESMValTool>