

The **?ECOMS UDG** provides access to a reduced number of variables for the available [datasets?](#). The following list of variables has been identified (and is periodically updated) according to the user's needs, receiving feedback from EUPORIAS WP22 (climate information indices, CIIs), WP23 (impact models), WP21 (calibration and downscaling) and SPECS WP61 (pilot applications) and WP52 (calibration and downscaling). See the section on the [assessment of user's needs](#) for more details.

Note that the short names below are *standard* codes which may not correspond to the naming conventions of the different datasets (boldface indicates standard variables according to the [?NetCDF Climate and Forecast Metadata Convention](#) and to the naming convention within SPECS). These short names have been used for homogenization purposes to build the [vocabulary?](#) of the [R package for data access](#).

The following labels are used in the table below (**Available**: The variable is available and ready to use through the ECOMS UDG; **e**: The variable exists in the original dataset; **P**: The variable exists in the original dataset and work is in progress to incorporate it to the UDG; blanks indicate lack of data).

| short name | Variable description                       | Frequency | Aggregation | Availability for the following datasets: |                      |                    |                    |             |
|------------|--|-----------|-------------|--|----------------------|--------------------|--------------------|-------------|
|            |  |           |             | ?System4 seasonal 15                     | ?System4 seasonal 51 | ?System4 annual 15 | ?CFsv2 seasonal 16 | ?SPECS-ESGF |
| tas        | Near-Surface air temperature               | Daily     | mean        | Available                                | Available            |                    | Available          | e           |
| tasmax     | Daily Maximum Near-Surface Air Temperature | Daily     | maximum     | Available                                | Available            | Available          | Available          | e           |
| tasmin     | Daily Minimum Near-Surface Air Temperature | Daily     | minimum     | Available                                | Available            | Available          | Available          | e           |
| tp         | Total precipitation amount                 | Daily     | accumulated | Available                                | Available            | Available          | Available          | e           |
| psl        | Sea Level Pressure                         | Daily     | mean        | Available                                | Available            | e                  | Available          | e           |
| ps         | Surface air pressure                       | Daily     | mean        | P(*)                                     |                      |                    | e                  |             |
| wsp        | Wind speed (at 10m)                        | Daily     | mean        | P(*)                                     | e                    | e                  | e                  |             |
| tdps       | 2m Dewpoint Temperature                    | Daily     | mean        | P  | e                    |                    |                    | e           |
| huss       | Surface (2m) specific humidity             | Daily     | mean        | P(*)                                     |                      |                    | e                  |             |
| rsds       | Surface Downwelling Shortwave Radiation    | Daily     | mean        | P  | e                    |                    | e                  | e           |
| rlds       | Net Longwave Surface Radiation             | Daily     | mean        | P  | e                    |                    | e                  | e           |
| sst        | Sea surface temperature                    | Daily     | mean        | e  | e                    | e                  |                    |             |
| uas        | Eastward Near-Surface Wind                 | Daily     | mean        | e  | e                    | e                  | e                  | e           |
| vas        | Northward Near-Surface Wind                | Daily     | mean        | e  | e                    | e                  | e                  | e           |
| wspmax     | Wind speed (at 10m)                        | Daily     | maximum     | e  | e                    | e                  | e                  |             |
| wgust      | Wind gust                                  | Daily     | maximum     | e  | e                    |                    |                    |             |
| mrso       | Total Soil Moisture Content                | Daily     | mean        |  |                      |                    | e                  | e           |
| mrros      | Surface runoff flux                        | Daily     | accumulated | e  | e                    |                    | e                  |             |
| mrro       | Total Runoff                               | Monthly   | mean        | e  | e                    |                    |                    | e           |
| ssro       | Sub-surface runoff rate                    | Daily     | mean        | e  | e                    |                    |                    |             |
| prsn       | Snowfall Flux                              | Daily     | mean        | e  | e                    |                    |                    | e           |
| wcsl       | Water Content of Soil Layer                | Daily     | mean        | e  | e                    |                    |                    |             |
|            |  | Monthly   | mean        | e  | e                    |                    |                    |             |
| z850       | Geopotential 850mb                         | Daily     | mean        | e  | e                    | e                  | e                  |             |
| z925       | Geopotential 925mb                         | Daily     | mean        | e  | e                    |                    |                    |             |
| ua850      | Eastward Wind                              | Daily     | mean        | e  | e                    | e                  | e                  |             |
| va850      | Northward Wind                             | Daily     | mean        | e  | e                    | e                  | e                  |             |
| ua925      | Eastward Wind                              | Daily     | mean        | e  | e                    |                    | e                  |             |
| va925      | Northward Wind                             | Daily     | mean        | e  | e                    |                    | e                  |             |
| zg700      | Geopotential Height                        | Daily     | 12 UTC      | e  | e                    | e                  | e                  |             |
| zg1000     | Geopotential Height                        | Daily     | 12 UTC      | e  | e                    |                    | e                  |             |

(\*) These variables do NOT exist in the corresponding dataset, but they will be derived/approximated from other available variables. More information in the table of [?variables-datasets mapping](#).

**Data Homogeneization:** The different nature of the datasets, and the idiosyncratic naming and storage conventions often applied by the modelling centres, makes necessary an homogeneization across datasets in order to implement a truly user-friendly toolbox for data access. To this aim, the [R package for data access](#) has been developed. Data homogeneization is achieved through the creation of a common vocabulary. The particular variables of each dataset are then translated -and transformed if necessary- into the common vocabulary by means of a *dictionary*. Both features -vocabulary and dictionary- are described [here?](#).