

# NETCDF-CF\_GRID Export

## Overview



This export is available in DELFT-FEWS versions after 28-10-2009 (FEWS version 2009.02)

Exports data to NetCDF files which comply to the CF 1.6 standard.

To indicate that data values are missing, NetCDF-CF exports use float value 9.96921e+036 by default. It is possible to change it by entering a different missing value (NaN or other) in the configuration files. Use option <exportMissingValue> in TimeSeriesExport module, and <missVal> in GeneralAdapter

More information about the cf standards can be found at: <http://cfconventions.org/>

There are six types of NetCDF-CF exports which can be defined:

- Time series ([NETCDF-CF\\_TIMESERIES](#))
- Profiles ([NETCDF-CF\\_PROFILE](#))
- Grids ([NETCDF-CF\\_GRID](#))
- Time series ([NETCDF-CF\\_TIMESERIES\\_MATROOS](#))
- Profiles ([NETCDF-CF\\_PROFILE\\_MATROOS](#))
- Grids ([NETCDF-CF\\_GRID\\_MATROOS](#))

## Configuring the export



For curvilinear grids to be exported correctly from Delft-FEWS, any dry cells in the grid should also be stored in FEWS. This means that the dry cells and the number of rows and columns should be included in the grid definition. This should already be included in the grid definition at the time when the data is imported into Delft-FEWS.

An example of the NETCDF-CF\_GRID export will be given here.

In FEWS, it is possible to couple time series with pre-configured properties. From 2021.02 the properties can be exported to the NETCDF file as NETCDF attributes. See a config example below. Using the example, the name of the NETCDF attribute will be systemid, the value will be the value of timeSeriesProperty with the name rivieren2, that belongs to the exported time series.

Since 2021.02 it is also possible to import NETCDF attributes into FEWS and save them as timeSeriesProperty. You can see a config example for that here: [NetCDF formats that can be imported in Delft-FEWS](#)

### ExportNetcdf\_Grid 1.00 default.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<timeSeriesExportRun xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.wldelft.nl/fews http://fews.wldelft.nl/schemas/version1.0/timeSeriesExportRun.
xsd">
  <export>
    <general>
      <exportType>NETCDF-CF_GRID</exportType>
      <folder>%REGION_HOME%/Export/netcdf/2D</folder>
      <exportFileName>
        <name>.nc</name>
        <prefix>
          <timeZeroFormattingString>yyyyMMddHHmm</timeZeroFormattingString>
        </prefix>
      </exportFileName>
      <idMapId>IdExportNetCDF</idMapId>
      <exportMissingValueString>-9999.0</exportMissingValueString>
    </general>
    <properties>
      <string key="timeseriesproperty:rivieren2" value='netcdfattribute:systemid ' />
    </properties>
    <timeSeriesSet>
      <moduleInstanceId>ExportNetcdf_Grid</moduleInstanceId>
      <valueType>grid</valueType>
      <parameterId>G.umf</parameterId>
      <locationId>NHI_H_L001</locationId>
      <timeSeriesType>simulated historical</timeSeriesType>
      <timeStep unit="day" multiplier="1"/>
      <relativeViewPeriod unit="day" start="-7" end="3"/>
      <readWriteMode>add originals</readWriteMode>
    </timeSeriesSet>
  </export>
</timeSeriesExportRun>
```

Some additional properties can be configured concerning the netcdf export format. Like for writing compressed netcdf [Exportmodule-properties](#).

An example for the IdMapping used for the NETCDF-CF\_GRID export is shown below.

If the parameter has an entry in the standard name CF table, you can enter it in the externalQualifier1 attribute of the parameter. The value of this qualifier will be added as the standard\_name attribute for this variable in the netcdf exported file.

### IdExportNetCDF 1.00 default.xml

```
<idMap version="1.1" xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.wldelft.nl/fews http://fews.wldelft.nl/schemas/version1.0/idMap.xsd">
  <parameter internal="G.umf" external="groundwater" externalQualifier1="groundwater (not a standard name,
just as example)"/>
  <location internal="NHI_H_L001" external="NHI_H_L001"/>
</idMap>
```