

Selection Grid Ensemble Member by Index

Description

This selection ensemble member by index transformation takes two inputs. One is a grid time series with different ensemble members. The other one is a scalar time series. The values of the scalar time series should be ensemble indices. The transformation uses the time of the indices for the output, and places the grid with the corresponding ensemble index into that time step.

Because the input is both SCALAR and GRID, the headers cannot be matched based on location id (as the scalar and the grid have different location ids). Instead of the transformation framework automatically matching input and output (based on location id) the transformation matches all possible input headers with the output.

Because of this, **the transformation can only be run using a single location (and no location set.)** If running the transformation using location sets is desired, further developments are necessary.

The transformation has one optional parameter, `matchInputAndOutputGridTimes`. Because the time of the output time series is determined by the time of the ensemble member indices, it can happen that the input grids do not have data at the given time. If `matchInputAndOutputGridTimes` is set to false, and the exact time step is unavailable, the first available grid data of the given ensemble member will be filled in the output. If it is set to true, output will only be filled if the data is available for the exact time. Default value for `matchInputAndOutputGridTimes` is false.

Some notes as to behaviour:

- Missing values in the index time series result in missing values in the output time series.
- Index values for which no matching ensemble member is found result in missing values in the output time series

```
<transformation id="ensembleLookup">
  <selection>
    <gridEnsembleMemberByIndex>
      <inputEnsembleIndices>
        <variableId>InputIndex</variableId>
      </inputEnsembleIndices>
      <inputTimeSeriesGrids>
        <variableId>InputGrids</variableId>
      </inputTimeSeriesGrids>
      <output>
        <variableId>Output</variableId>
      </output>
      <matchInputAndOutputGridTimes>false</matchInputAndOutputGridTimes>
    </gridEnsembleMemberByIndex>
  </selection>
</transformation>
</transformationModule>
```