

## Meteorological map files

### Required:

Required when `MM5 = TRUE`.

### Name:

User-specified

### Read by:

`InitNewStep()`

### Format:

2D Matrix

### Purpose:

A series of files that contain the output from the MM5 mesoscale meteorological model.

### Comments:

Currently, all MM5 maps are expected to be in binary format and the option `MM5 = TRUE` is currently incompatible with the `Format = NETCDF` option. However, there is no fundamental reason for this other than that the code has not yet been written. This is relatively straight forward to implement.

The MM5 files do not need to have the same extent and resolution as the DHSMV mask file, but they must cover the entire basin.

### Details:

- If the `format` is `BIN` or `BYTESWAP` (currently the only supported formats), then `afloat` should be used.
- The following MM5 input files are required:
  - Temperature (°C)
  - Humidity (%)
  - Wind speed (m/s)
  - Shortwave radiation (W/m<sup>2</sup>)
  - Longwave radiation (W/m<sup>2</sup>)
  - Precipitation (mm/timestep)
  - MM5 topography (m)
  - MM5 temperature lapse rate (°C/m)
  - Soil temperature for each soil layer (°C) (Note that this is only needed when `Sensible heat flux = TRUE`).