

## Optional output files

There are a number of optional output file that the model can produce. In short, the following possibilities are available:

### Pixel output

Most state variables and fluxes are output for each timestep for a particular location. The files are in ASCII format and have a header that specifies what is reported in each column.

### Maps

Maps are complete fields of a particular variable (state or flux) at a particular time. These can be output periodically, but take up a lot of space for any sizeable application.

In the `Configuration` file you need to use the ID of the variable that you would like to output. Consult the [list of variable IDs](#) to find out which ID to use. The files are in `BINARY` or `NETCDF` format.

### Images

Images are reduced precision versions of the maps. These are convenient if you want to look at changes over time, but do not want to deal with the large data volume of the maps. All output values are stored as `unsigned char` (`Format = BIN`) or as `NC_CHAR` (`Format = NETCDF`), and the output values are scaled from 0 to 255.

In the `Configuration` file you need to use the ID of the variable that you would like to output. Consult the [list of variable IDs](#) to find out which ID to use. The files are in `BINARY` or `NETCDF` format.

### Graphics

If the source code is compiled with the `-DHAVE_X11` option, you have the option to display some of the fields in real-time (while the model is running). This is very useful when you want to figure out what is going on.

In the `Configuration` file you need to use the ID of the variable that you would like to output. Consult the [list of variable IDs](#) to find out which ID to use. The files are in `BINARY` or `NETCDF` format.