IMAGE Reporting tool

**Introduction**

This is an outline of the data delivery / reporting tool as used in the IMAGE model. It transfers data from multi-dimensional model data output files (in our case .dat files in our own programming language MyM) to a xls format which can be uploaded to project databases.

Note: The tool has a modular structure and is in its current form only usable for IMAGE. The Java tool, which is the most relevant part of the tool, has an interface equipped to deal with our own language (MyM) and the 26 IMAGE regions (currently hard-coded). However, it could be changed to function in other models. It would take several days to make this work.

The advantage of the Java tool is that it can work with multidimensional output files. If a model has single dimensional output, the added value of the tool is small. So, if you use Java and have multidimensional output (e.g. CSV files) and would be interested to implement it in your model, contact the IMAGE team ([Mathijs.harmsen@pbl.nl](mailto:Mathijs.harmsen@pbl.nl)).

**Example**

Example variable “primary energy”

(in green below are the relevant files. Also uploaded on Github)

**Step 1: First the data is taken from the (Tortoise) Repository and saved on the “Reporting tool” location**

In the case of IMAGE, the folder in which this data is stored is called T2RT (TIMER to reporting tool. TIMER is the IMAGE energy module).

Initiated by batchfile “update data”

Which makes use of batchfile “exportFromRepos”

**Step 2: The data from the T2RT folder is copied to an XLS output file that is used for reporting**

For this, we use a mapping XLS that knows the location of specific data that is asked for in the project template.

Files needed for this step:

Batchfile ”MakeDatadelivery.bat”

Which makes use of a Java\* tool that translates MyM (IMAGE programming) data to XLS data.

The mapping xls (called: “supermapping\_TIMER2015”) works then as follows (see example line below). In the first two columns are the variable name and the relevant unit. This corresponds with the same two columns in the project template file (indicating that we need this data for the project)(Example template:”SSPDB\_\_IAM\_data\_template\_2015-05-05”). Then the third column states where the data can be found. The fourth indicates that we need regional specification in the output. The fifth which values we need (r = regions), The sixth gives the size of the file (here: two dimensions, 28 region categories and 10 primary energy carriers). The seventh gives the unit of the file (not used for reporting) and the eighth is a conversion factor (can also be 1, but in this case the values should be multiplied by 0.001).

Attached is an example of a data file (SSP2) which is used for reporting.

***Mapping XLS, line for “primary energy”***

(1)    Primary Energy (2) EJ/yr               (3) T2RT\tpes.out            (4) regional         (5) [r,10]              (6) [28,10]           (7) PJ     (8) 0.001

***Project template xls, sheet “data”, line for “primary energy”***

(1)    Primary Energy (2) EJ/yr