**Build your own model for EF5 Simulations.**

**BASIC FILES BLOCK**

First step is to calculate the basic grid files (flow direction, flow accumulation, DEM), for this, users have different options such as different methodologies using QGIS or ArcGIS. In this tutorial, we provide 2 different python codes.

If users want to create a model based on available Hydrosheds

**PRECIPITATION BLOCK**

**PET FILES BLOCK**

**PARAMETERS:**

**CREST.**

The first step to compute the crest parameters is to get Soil texture rasters: (Percent Sand, Percent Clay, and Percent Silt, Depth to bedrock raster in meters). A good source for this layers is <https://soilgrids.org/>. After retrieving the necessary layers, it is up to the users to clip the global dataset into their study region. For this, users can do QGIS approach or using gdal command line:

gdalwarp -te xmin ymin xmax ymax -of GTiff /path/to/soilgrids/inputlayer\_250m.tif output\_filename\_250m.tif

where xmin ymin xmax ymax is the extend of the desired region to clip.

After clipping the files, use the code 4\_Crest\_parameters\_estimation.ipynb in the github repository, this code allow users to resample to the desired grid resolution and create the CREST parameters.

**IMPERVIOUS LAYER:**

**KINEMATIC WAVE:**