User Guidelines for 3D voxel-based model of peatland hydrology (PEAT VOXEL)

1 INSTALLING NETLOGO

- Install **NetLogo 5.3.1** (https://ccl.northwestern.edu/netlogo/download.shtml)
- Copy **pathdir** folder to NetLogo extensions directory (C:\Program Files\NetLogo 5.3.1\app\extensions**Paste here**)

2 PREPARING INPUT DATA

- All input data are stored in …\data\input\…
- Prepare daily rainfall and potential evapotranspiration data in a comma delimited text file. See the sample file: "parameters-climate.csv"
- Prepare land cover, elevation, and peat depth map in ASCII file. You can create an ASCII file using ArcMap or other GIS-tools. **Note:** All of maps must have same extent area or same columns and rows in ASCII file to overcome the error of the model. See the sample file: "map-land.asc"; "map-dem.asc"; and "map-peat-depth.asc"
- Before running the model, you can parameterize the peat properties and water initial of peat in area of interest by configure the values of parameters (i.e. hydraulic conductivity, initial water in acrotelm and catotelm, saturated capacity, etc.) in **parameters-peat.csv** and **parameters-land.csv**

3 RUN THE MODEL

- Execute peatvoxelXXXXX.nlogo3d using NetLogo 5.3.1 3D
- Uncheck **view updates** to speed up computation
- Configure total of warming up days using **warming-up-duration** slider
- Turn on the **report-ascii-map** if you want to get ascii file of output
- Click **setup** and wait it untill the model initialisation is done
- Then, click **go** for simulate the model
- The output of the model will saved in output folder (…\data\output\…)

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