Deliverable Summary Report: D1.1

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Work Package: *WP 1 – 'Satellite data and derived products*
Deliverable name: *D1.1 –*
'Copernicus vegetation layers prepared for ingestion into mesoscale models'
Deliverable status: *[Completed]*

Deliverable description

WP1 description: Vegetation layers from Copernicus Global Land Service (LAI, NDVI) and Pan-European high-resolution products (tree cover density, forest type) will be prepared for fast-track ingestion in flow models…….
This deliverable, D1.1, aims to prepare selected vegetation layers from the Copernicus Global Land Service for ingestion into mesoscale and microscale models.
Expected outcome:

- Internal conversion software to be developed (that can be used for other datasets too)
- Selected data from Copernicus Global Land Service converted into usable formats
- Data tested and demonstrated with mesoscale and/or microscale models

Activities and tasks completed

1. EMD internal software completed to convert Copernicus (CORINE) data to WRF readable files (index file + binary files)
2. Successful test of EMD standard WRF mesoscale modelling setup with Copernicus (CORINE) data
3. EMD included Copernicus (CORINE) data with microscale windPRO modelling, see figures below.
4. A global cloud free "Sentinel 2" RGB layer is prepared as background map for mesoscale and microscale modelling (in order to identify/validate terrain features). Such a map is often required for visual inspection of mesoscale and microscale surface models (see picture below).

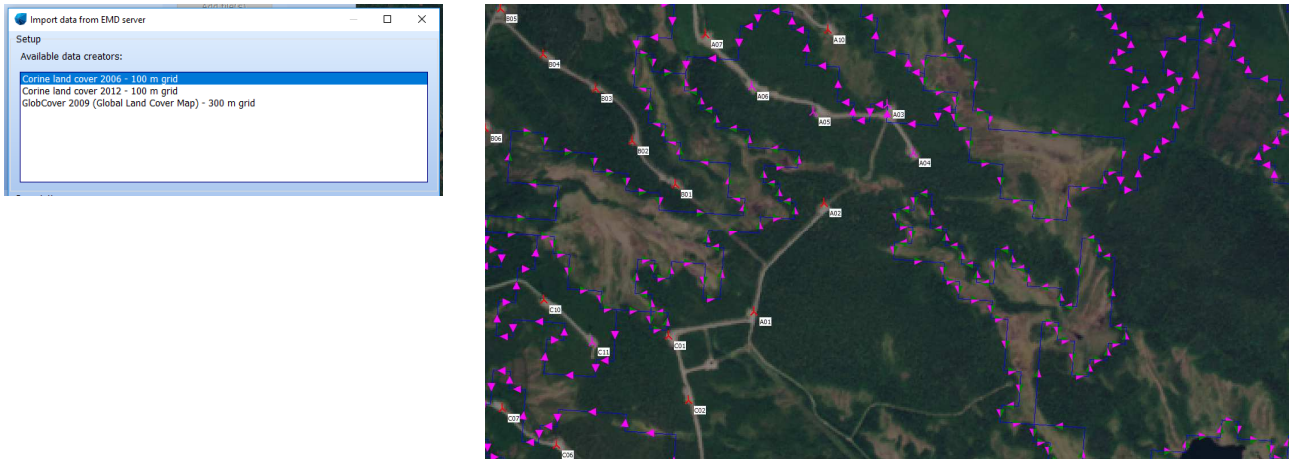

Figure 1: Left: CORINE data in windPRO. Right: Roughness lines from CORINE 2012 on top of Sentinel 2 imagery (site in Sweden).

Deliverables and outcomes

The deliverable is completed as EMD has prepared Copernicus vegetation layers (CORINE) for ingestion into flow models. It has been tested with the standard EMD-WRF modelling setup and microscale windPRO/WAsP. It is worth mentioning that the Copernicus "MODERATE DYNAMIC LAND COVER 100M" dataset was released during autumn 2017 as a demonstration dataset for Africa. When more regions are released, we expect also this dataset to be included in the microscale/mesoscale toolchain.