

Abstract for the Remote Sensing Days 2018

Renne Tergujeff, Tuomas Häme / VTT

### Forestry Thematic Exploitation Platform enables efficient use of satellite data for forestry

Heavy growth in the availability of earth observation data globally has opened new opportunities for exploitation of the data. Developed in a project by the European Space Agency ESA, the Forestry Thematic Exploitation Platform (Forestry TEP) is a new online solution for efficient processing of satellite data for analysis and monitoring of forests. Forestry TEP aims to provide a one-stop shop for forestry remote sensing services.

Forestry TEP serves commercial, governmental and research users in the forestry sector by offering on-line processing services and tools, which help to generate value-added forest information products based on satellite data globally. To support this goal, third parties can use the platform to develop and market their services and products.

Currently available on the platform is the full global catalogue of the optical Copernicus Sentinel-2 imagery, as well as all data from the Sentinel-3 mission and large amount of Landsat data. Additionally, radar data from the Sentinel-1 mission is available over the European and neighbouring areas.

The processing services currently available on the platform enable e.g. computation of various vegetation indices, mapping of land and forest cover, analysing forest change, and estimating forest biomass. Additionally, popular tools such as QGIS, SNAP with the Sentinel Toolboxes and Monteverdi (user interface for Orfeo Toolbox), can be used directly through a web browser, without needing to install the software locally.

Forestry TEP also provides a web based developer interface for creating own processing services on the platform, utilizing for example the programming language Python and the libraries of Orfeo Toolbox or SNAP. These services can be used on the platform privately or they can be shared to a group of colleagues or opened to the world.

Forestry TEP frees the users from downloading and managing locally huge amounts of satellite data and tools, thus creating opportunities for efficient exploitation of data. During the development phase, the platform has already been used in two pilot projects: for the Finnish Forest Centre in detecting of harmful shrubs in forest regeneration areas, and for two organizations in Mexico in mapping the forest cover in the states of Chiapas and Durango. The platform is available now at <https://forestry-tep.eo.esa.int> for all interested users and service providers.