

## The POSTEL Land Surface Thematic Center

### Description

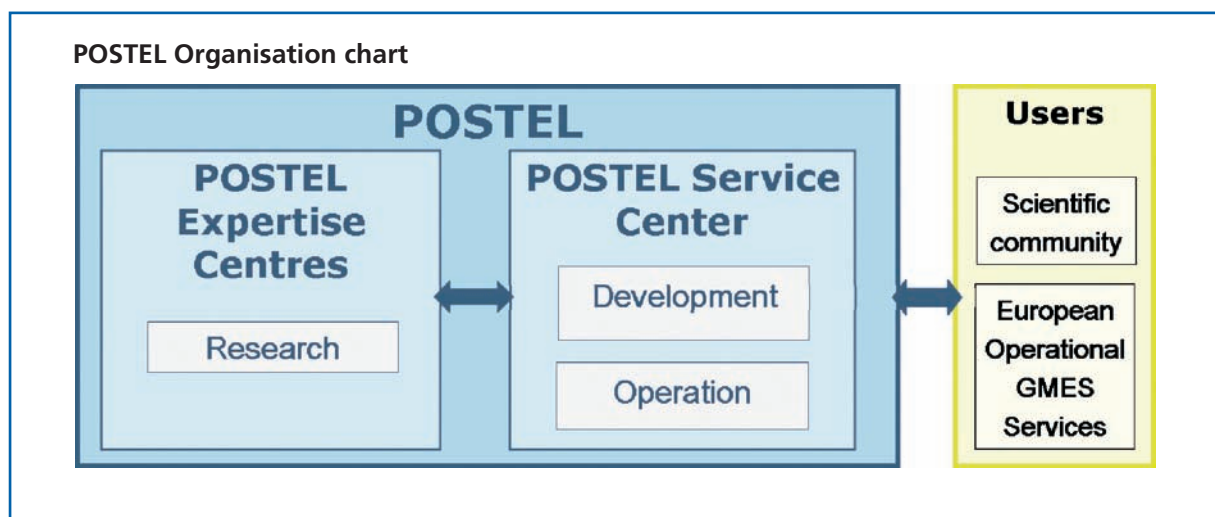
The POSTEL Thematic Centre is part of a national effort to federate scientific expertise and to pool the means to be implemented in order to produce validated maps of variables derived from Earth Observation satellite data. POSTEL addresses the Land Surfaces thematic area, while ETHER and ICARE (see reports therein) address respectively atmospheric chemistry, and atmospheric aerosols and clouds.

The POSTEL Thematic Centre intends to become an element of the Land Monitoring Core Service (LMCS) of the European GMES programme to be implemented in 2008 and beyond. The consortium that is in charge of developing POSTEL at the French scale currently includes CNES, Météo-France, CNRS/INSU, IRD and INRA. As it is expected to quickly gain a European standing, other institutions are liable to join it.

The role of POSTEL is to transform the images acquired by remote sensing earth observation satellites in spatially distributed indicators describing land surface soil and vegetation properties (“biogeophysical variables”).

The Thematic Centre revolves around two types of bodies:

- Scientific Expertise Centres, which are laboratories or research organisations that contribute to designing and validating Earth Observation derived products. Such Expertise Centres manage all the scientific activities related to the Thematic Centre.
- A Service Centre. Its mission consists in designing operational processing lines, and assuring the operational production of products and their distribution to the users. The Service Centre is located at Medias-France in Toulouse.



The user community benefiting from the Service Centre products and services is the international science community as well as the emerging GMES European environmental services which will formally be part of the LMCS and of the Land Surface Downstream Services.

POSTEL provides spatialized biogeophysical variables produced in various projects (ESA, EC, national) in three areas :

Continental vegetation and soil:

- Leaf Area Index
- Fraction of vegetation cover,
- Fraction of radiation absorbed for photosynthesis
- Land cover,
- Vegetation Index
- Burnt Areas
- Surface Reflectance

Radiation cycle:

- Albedo
- Bidirectional Reflectance Distribution Function,
- Downwelling Short-wave and Long-wave radiation fluxes
- Land Surface Temperature.

Water cycle:

- Precipitation
- Soil Moisture
- Evapotranspiration
- Water Bodies
- Water Level

All products are available free of charge for non-commercial users through the POSTEL Web site, at <http://postel.mediasfrance.org>.

The detailed product catalogue as well as additional information on algorithms, formats and other relevant information can also be found on this Web site.