



## EUFODOS

### European Forest Downstream Services Improved Information on Forest Structure and Damage

Forests play a key role in the European economy and environment. This role incorporates ecological as well as economic functions which can be affected by the occurrence of insect infestations, storms or windfall events. Local or regional authorities thus require detailed information on the degradation status of their forests to be able to take appropriate countermeasures against forest damage and to ensure sustainable forest management. The EUFODOS project will use state-of-the-art satellite and laser scanning technology to provide forest authorities with cost-effective, timely and comprehensive information on forest structure and damage. EUFODOS is carried out within the GMES programme and is scheduled to run from January 2011 to the end of 2013.

#### The main goals

The European Earth Observation Programme GMES provides data useful in tackling a range of issues including climate change and citizens' security. The purpose of GMES is to deliver information which corresponds to user needs. The Forest Downstream Services (**FDS**) to be developed within EUFODOS include in particular the assessment of **forest damage** and the measurement of **functional parameters** for **commercial** and **protective forests**. For example the latter has an important function to maintain the safety of settlements and infrastructure in alpine areas. The assigned monitoring services, urgently required by regional European forest authorities, will be developed to an operational level by a consortium of research organisations and commercial service providers from Austria, Germany, Finland, Italy, Bulgaria and Poland.

Although the main focus in EUFODOS is laid on regional services it is foreseen to put the results also at disposal to higher authorities in order to support their reporting obligations of national and international forest policies, as e.g. the Ministerial Conference on the Protection of Forests in Europe (MCPFE) and Pan-European Indicators on Sustainable Forest Management, UNECE/FAO Forest Resource Assessment, ICP Forests and ICP Integrated Monitoring or the Alpine Convention.

In EUFODOS it is mandatory to use existing capacities as for example from projects like GEOLAND, GSE-FM, SAFER, FUTMON or the JRC activities like EFDAC or EFFIS. Also EFDAC or NFI data will be considered as useful data sources.

#### The benefits

The use of space- and air-borne sensor platforms allows data to be acquired at **short time intervals** and in a **cost effective** way. For instance, a first assessment of windfall damage could be derived from satellite data faster and with lower costs than by multiple helicopter flights or field trips. The Forest Downstream Services will thus provide fast and reliable information for effective damage assessment and sustainable forest management on a regional scale.

The data can be utilized by users in a wide range of applications:

- **Effective damage assessment and countermeasures:**  
identification of damaged areas – due to storm, fire or insect infestations – in order to enable proper countermeasures, compensation payments and reforestation planning
- **Sustainable management of protective forests:**  
targeted management of protective forests in order to maintain and enhance their protective function against natural hazards
- **Sustainable management of commercial forests:**  
wood procurement planning and strategic investment planning for commercial forests
- **Reporting:**  
revision of forest maps and inventories, compilation of regular reports and annual statistics (e.g. changes in forested area), establishment of forest damage information systems

EUFODOS involves an extensive user community well connected to other related GMES User Groups. This construction will facilitate the roll-out of the services and will create a strong socio-economic benefit.