Newsletter

A message from the coordinator

By Mathias Schardt, Joanneum Research

The EUFODOS project is already in its last project year and we presently pass through an intensive implementation phase with promising services and products. As we have also formidably increased the range of potential users, we will take the chance to give an overview on the whole project in this newsletter and are announcing the presentation of success stories in the forthcoming newsletters.

EUFODOS at a glance

By Stefanie Linser, Environment Agency Austria

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. EUFODOS (2011–13) uses upcoming GMES High Resolution Forest Core Layer, state-of-the-art optical and radar satellites as well as laser scanning technology to provide forest authorities with cost-effective and timely information on forest structure and damage.

Main Goals

To develop sustainable Forest Downstream Services (FDS) for the effective assessment of forest damage and forest functional parameters based on GMES Land/Forest Core Products.

Partners

The FDS, strongly asked by regional forest authorities, will be developed to an operational level by a consortium of commercial service providers and research organisations from Austria, Bulgaria, Finland, Germany, and Italy in different European testcases. The EUFODOS test sites are located in 7 European countries in the temperate and boreal zone.

Users and user federation

EUFODOS involves an extensive user community. To secure that the service development is in line with the user requirements all EUFODOS users are engaged in a User Executive Body (UEB) well connected to other related GMES User Groups. The intensive cooperation between service providers and users within the EUFODOS project facilitates the roll-out of the services and the uptake of the services by the users. It also enables the consortium to address new potential users and therefore raise awareness of the services.
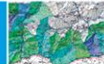
Applications and products

EUFODOS focusses on the development of so called 'Forest Downstream Services' for the surveying of forest damages and for the investigation of forest parameters which can be used for economic assessments or as basis for the targeted management of protective forests. This type of services are highly requested by various forest authorities in Europe. Although the main focus in EUFODOS is on regional services, it is also the intention to put results at the disposal of national and international authorities. This will support their various reporting obligations, for instance with regard to indicator/data assessments of Forest Europe (Ministerial Conference on the Protection of Forests in Europe), UNECE/FAO Forest Resource Assessment, ICP Forests and ICP Integrated Monitoring or the Alpine Convention.

The utilisation of space and airborne sensor platforms facilitates that data can be acquired in very short time intervals and in a cost efficient way. A preliminary assessment of storm damage can e.g. be delivered to the users in the form of geo-referenced damage maps based on satellite data, in a more rapidly and more cost effective way than conventional assessment methods requiring helicopter flights or in-situ field trips. From remote sensing-based services, rapidly available and reliable information for effective damage assessment can be offered to various users and can be used in a wide range of applications.

The EUFODOS products can for instance be applied for:

- **Effective damage assessment and countermeasures**
  Identification of damaged areas – due to storm, fire or insect infestations (Fig. 1) – in order to enable proper countermeasures, compensation payments or reforestation planning.

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- **Sustainable management of protective forests**
  Targeted management of protective forests 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.

Fig. 1: Snowfall/Snowbreak Damage Product.

Conclusions and Outlook

So far, the EUFODOS project has successfully produced demonstration products for the assessment of damages caused by forest fires, heavy snowfall or insect infestations as well as demonstration products for the assessment of ecological and economical forest parameters. Some applications also encompass tools for the derivation of various forest parameters from LIDAR data. So far, storm events rarely occurred during the project time, nevertheless the CHANGE DETECTION toolboxes for a rapid derivation of windfall areas have been completed to an operational level.

All products are needed to support a sustainable forest management in protective forests or the commercial exploitation of timber, and also for their integration into Forest Geographic Information Systems. All products have been successfully evaluated by the Service Providers and the respective users. The users will certainly benefit from these products by using

them in cases of emergency as well as for planning purposes.

Report on the PREFER Project Meeting, Rome 16th May 2013

By Klaus Granica, Joanneum Research

Representatives from the EUFODOS project have been invited to the PREFER project meeting in Rome on 16th May 2013 by the PREFER coordinator Giovanni Laneve (Sapienza University). The contact was initialized by PO Florence Beroud who has identified some common themes within these projects during the EUFODOS project meeting in Sofia. Therefore, a cooperation between these FP7 projects are anticipated, especially with respect to the forest fire issue.

PREFER is a project funded in the EU FP7, with start on 1st December 2012. The main objective of PREFER is to set up space-based end-to-end information services, based on satellite remote sensing data, to support prevention/preparedness and recovery phases of the Forest Fires emergency cycle in the European Mediterranean Region.

In EUFODOS forest downstream services are developed which support specific topics, such as damage from storm, fire, insect infestations or snow. In order to achieve these goals toolboxes are created which encompass such as CHANGE DETECTION or LIDAR processing.

Klaus Granica (JR) and Vassil Vassilev (RESAC) presented some of the most interesting EUFODOS applications and toolboxes to the PREFER consortium. The presentation of RESAC highlighted the importance of the close interaction and partnership with the User in definition and development of the downstream services for forest fires damage assessment. The PREFER partners have shown much interest for these applications and the EUFODOS partners have identified common topics. A more intensive cooperation is envisaged for the next months.
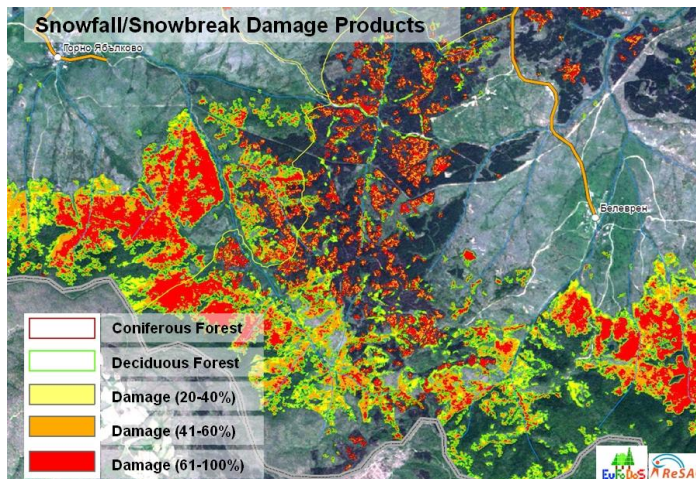
Upcoming events

EUFODOS Final Meeting, 2-3 December 2013 in Brussels, Belgium. **Open for all interested stakeholders.** Contact: eufodos@joanneum.at

EUFODOS Website

http://www.eufodos.info/