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Welcome to the third Newsletter

By *Stefanie Linser, Environment Agency Austria*

Dear Reader, I am happy to introduce the third issue of the EUFODOS Newsletter.

I wish you a relaxing summer break and look forward to meeting you at the forthcoming EUFODOS Progress Meeting in Freiburg, Germany in October.

EUFODOS Service Case in Austria

By *Herwig Schüssler, Forestry Board of Styria and Klaus Granica, Joanneum Research*

The Forestry Board of Styria (FA10C www.wald.steiermark.at) is pleased to be involved in the EUFODOS project, because this enables us to use the advantages of EO data – in terms of quality and rapid delivery – in our daily work.

Overview on windfall areas needed

In the past 5 years it was recognized that the authorities need a rapid assessment on windfall areas – preferably one to two weeks after the event – with special focus on the exact location and extent of the damaged stands. In the decision process on forest planning the forest service needs also information on areas at risk, an assessment of pre-damaged stands and an automated segmentation of forest structures.

Currently the Forestry Board is not in the position to realize surveys over large areas because they are too cost-intensive in the sense that field assessments or expert certificates are often required. To overcome these drawbacks it is possible to use the EO derived information from EUFODOS for referencing tasks in order to calibrate the models on one hand and to reduce costs and deviations from interpretation on the other hand

This process is not only driven by the reporting duties such as Kyoto, but more by the urgency to obtain a realistic assessment of the available quality and quantity of wood storage. New technologies, like the ones developed in EUFODOS, enable not only the computational processing of forest data, but also the identification of single trees with LIDAR data. This development is currently changing the system of yield science.



Forest area in Styria damaged by storm.

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EUFODOS results support also the management of protective forests

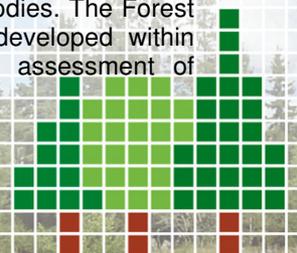
The results of the last Austrian Forest Inventory (2007/09; www.waldinventur.at) confirmed a high need on the maintenance and rejuvenation of protective forests. The forest authorities are committed to use financial resources addressed for the conservation of the protective forest stands with high liability. In order to fulfil these requirements it is a must to describe the criteria for protective forest – apart from its legal definitions – in a clear and reproducible form to permit the optimum conversion of maintenance and rejuvenation tasks. The products derived in EUFODOS enables a targeted management of protective forests in order to maintain and enhance their protective function against natural hazards.

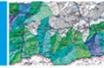


Protective forest area in Styria.

The benefits of EUFODOS

Finally it can be stated that the use of EO data in EUFODOS offers new possibilities in the derivation of forest parameters. In this context parameters derived from LIDAR data procure new types of data in a cost and time efficient way, which is an important aspect in the evaluation process of administrative bodies. 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 protective forests.

Concluding it can be said that this new technical support from EO data and also its limits are currently analysed and incorporated into the evaluation process of the Forest Body as a measure to plan realistically its personal resources.

Impacts of storms in Europe - an overview of the last decade

Based on EEA Technical report 13/2010 Mapping the impacts of natural hazards and technological accidents in Europe

Between 1998 and 2009, storms were the costliest natural hazard in Europe in terms of insured losses. Regarding human losses, storms rank fourth after heat waves, earthquakes and floods.

Storm occurrence has shown a strong variability with no discernible long-term trends since the late 1950s, but storm-related losses have been increasing in recent years. This increase is mainly driven by socio-economic factors and increasing exposure, i.e. increases in population and economic assets in the exposed areas.

Information on storm impacts has improved in the past decades. Even so, a more comprehensive database as well as better evaluation methods are needed to obtain an improved estimate of the overall costs of storms, particularly with regard to local public infrastructure, losses in the forestry sector and monetisation of forest ecosystem services affected by storms.

So far, there exists no specific policy at the EU level aiming at reducing the impacts of storms, but actions might be implemented in the context of the climate change adaptation. Storm management in the future should rely on integrated risk management and place a particular focus on preventive measures: increasing the robustness of (critical) infrastructure, improvement of early warning systems and raising public awareness, especially concerning behaviour.

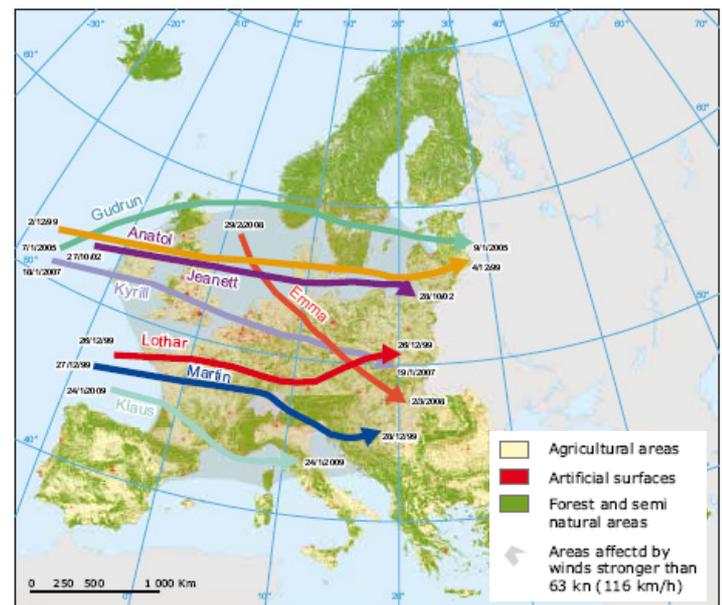
Data gaps and information needs

Storms are probably the natural hazard that affects the everyday life of Europeans most, and the hazard that generates the greatest volume of insurance claims. In central and western Europe, at least, the data on private economic losses appear to be fairly reliable, since a mature insurance market for storm protection has been developed there. However, no comprehensive database on the overall impact of storms in Europe currently exists. Policymaking in the field of natural hazards and disasters must therefore be based on a thorough understanding of disasters and be supported by accurate long-term data and assessments (EC, 2009). Therefore, monitoring of the impacts of hazards with a

view to accumulating reliable, accurate and comprehensive data should become a priority.

Moreover, better valuation methods are needed to assess the overall costs of storm events in a more comprehensive way. This is particularly the case when it comes to losses in specific sectors (e.g. public or forestry sectors), the monetisation of forest ecosystem services affected by storms, or assessments of the indirect, secondary and tertiary costs of such storm events.

Course of major storms in Europe in 1998–2009



Sources: ETC/LUSI based on EEA, 2004 and data and information from EM-DAT, 2010 and Fink et al., 2009.

More information is available at: <http://www.eea.europa.eu/highlights/natural-hazards-and-technological-accidents>.

Upcoming events

EUFODOS Software Training (WP 330), 26-28 September 2011 in Graz, Austria.

1st EUFODOS Progress Meeting, 10-11 October 2011 in Freiburg, Germany.

3rd International Colloquium - Scientific and Fundamental Aspects of the Galileo Programme, 31 Aug – 2 Sept 2011 in Copenhagen, Denmark.
<http://www.congrex.nl/11a12/>

Advanced RF Sensors and Remote Sensing Instruments (ARSI), 13-15 September 2011 at ESTEC, Noordwijk, the Netherlands. <http://www.congrex.nl/11c11>