



The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 262786 EUFODOS

A message from the editor

By *Stefanie Linser, Environment Agency Austria*

Dear EUFODOS users and project partners, welcome to the second issue of the EUFODOS Newsletter. In each issue we want to present information on one EUFODOS service and continue with articles of general interest to hopefully all users and service providers. The content of the newsletters is based on contributions "by the users - for the users" which is a nice principle in a community that promotes user-driven service development.

ANDROMEDA[®] and EUFODOS

By *H. Sagischewski, I. Sossna & S. Chmara, Thuringian State Institute for Forestry, Game and Fishery*

One of the tasks of the Thuringian State Institute for Forestry, Game and Fishery is the conduction of applied scientific projects like EUFODOS for purposes of the Thuringian forest administration. The respective focus on earth observation has the intention to optimize operational procedures and make work more efficient. Therefore, the immediate and effective compilation of damages e.g. from storm or insect calamities is of utmost importance.

The ANDROMEDA[®] project

The ANDROMEDA[®] project was conducted by the Institute of Aerospace Systems of the University of Braunschweig, the Department of Geoinformatics, Hydrology and Modeling of the University of Jena and some other companies and was finalised successfully in 2010. Within this research project a method was applied to collect aerial images via an unmanned aerial vehicle which flies along a predefined flight path. Each time when a picture is taken the position of the aerial vehicle is determined and saved together with the image data. The determination of the exact position is a prerequisite for the automatic processing of image mosaics in order to avoid the time consuming procedure of ground control point measurement. In addition, identical points are assigned automatically from neighbouring images for this procedure. One successful mission based on this method, was for instance, the surveying and mapping of massive timber damages in one Thuringian forestry district caused by the low-pressure storm „Xynthia“ in the evening of 28 February 2010. For this purpose a total of 3 100 ha of forest area were surveyed and mapped by an unmanned aerial vehicle. The damaged trees were measured with a very high accuracy.

Combination of ANDROMEDA[®] with EUFODOS

For the purposes of the Thuringian forest administration the ANDROMEDA[®] approach is a perfect addition next to the services which will be developed within the

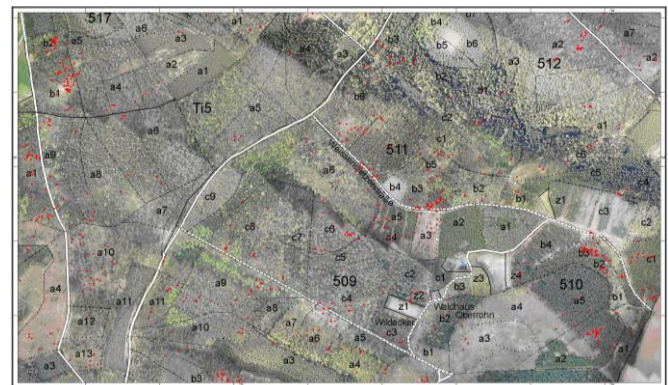
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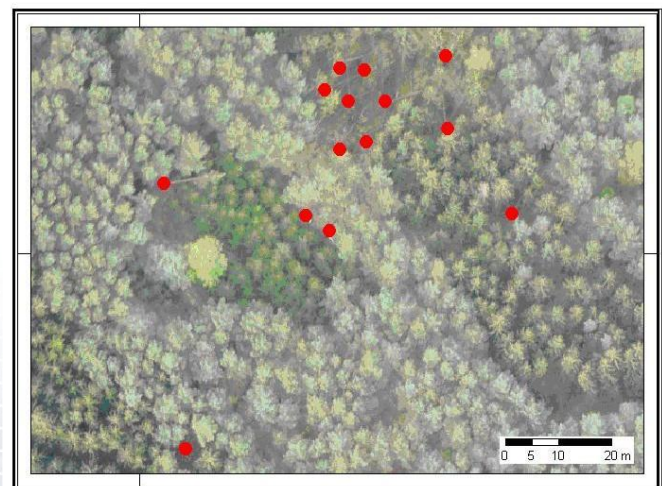
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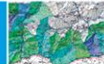


Damage map from storm Xynthia, ANDROMEDA[®] images, 26.04.10

EUFODOS project. The ANDROMEDA[®] technology is only suitable for smaller areas, whereas the focus of the services developed within the EUFODOS project is put more on the surveying and mapping of larger areas. A combination of both approaches may lead to substantial improvements for a rapid surveying of damaged forest areas: The ANDROMEDA[®] technology is suitable for the ascertainment of reference data which can be collected for the classification of satellite data. Currently, those reference data can only be collected during a very time consuming in-situ campaign.



ANDROMEDA[®] image of the damaged trees.



Additionally, the EUFODOS service may indicate hot spots where it might be reasonable to do a very detailed surveying and mapping with the ANDROMEDA® technology. The main advantage of the ANDROMEDA® technology in combination with the EUFODOS service is the almost automatic and standardized processing of all production steps, i.e. the prearrangement and conduction of the aerial survey, the processing of the images into mosaics as well as the analysis of the image data. This ensures a timely delivery of all results, that means within a view hours/days after a storm event.

More information can be found at www.andromeda-projekt.com; info@andromeda-projekt.com.

User Engagement in GMES

By Stefanie Linser, Environment Agency Austria

Implementation of a GMES User Forum

The European Parliament and Council Regulation on the European Earth monitoring programme (GMES) and its initial operations (2011-2013) entered into force on 9 November 2010. The primary objective of GMES is to meet user needs. The new Regulation establishes a User Forum as a dedicated body consisting of GMES public sector users appointed by the Member States. The tasks of the User Forum, listed in various articles of the Regulation, are to advise the Commission, in particular on the definition and validation of user requirements. The text of the regulation can be found at <http://register.consilium.europa.eu/pdf/en/10/pe00/pe00022-re01.en10.pdf>

Tasks of the User Forum

The GMES Regulation entrusts the User Forum with the task of advising the Commission with regard to the following aspects:

- Definition and validation of user requirements (Article 17.1);
- Establishment of service data requirements (Article 4.3);
- Coordination with public sector users (Article 17.1).

Consultation process

The User Forum is expected to reach out and develop links to the users of many different communities, in order to better understand their needs and advise on how the latter are best translated into service requirements. The advisory role on definition and validation of user requirements leading to the establishment of service data requirements necessitates a solid user consultation process, often on a thematic basis.

GMES User Forum

GMES User Forum preparatory workshop for land monitoring was held on 9 March 2011. A summary of established user requirements was presented as the

basis for the GIO Work Programme 2011 and was recognised as a good starting point for the initial operations. However, the community of potential (public) users of the land service is very broad with varying needs at different levels and various scales e.g. specialists in Member States wanting to access raw data or needing more frequent change mapping updates to complement national activities, or requiring support of reporting requirements under the acquis, or EU policy-makers interested in highly elaborated products (e.g. indicators, trends) in support of evidence for policy.

In line with the GIO regulation (No 911/2010), the implementation of the pan-European continental component foresees a combination of centralized and decentralized functions:

- Centralized production by commercial service providers of image post processing and production of High Resolution Layers (HRLs) combined with decentralized verification and enhancement by Member States;
- Decentralized production of the Corine Land Cover update by EEA Member and associated countries, involving production of high-resolution layers, Corine update and validation.

Upcoming events

Lets embrace space - FP7 space conference, 12-13 May 2011 in Budapest, Hungary
http://ec.europa.eu/enterprise/newsroom/caf/itemlongdetail.cfm?item_id=4845&tpa_id=1004&lang=en

31st EARSeL Symposium, 30 May - 2 June 2011 in Prague, Czech Republic
<http://www.earsel.org/symposia/2011-symposium-Prague/>

1st EARSeL SIG Forestry workshop: Operational remote sensing in forest management, 2 – 3 June 2011 in Prague, Czech Republic
<http://www.earsel.org/SIG/Forestry/call.php>

4th European Conference for Aerospace Sciences - EUCASS, 4 July 2011 in St. Petersburg, Russia
<http://eucass.ru/cs/index.php/eu/2010>

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

Note from the editor

I hope that you find the articles in the newsletter interesting and informative. If you have ideas or materials for articles I would be happy to be contacted.