

# EUFODOS

## European Forest Downstream Services – Improved Information on Forest Structure and Damages

### KEEPING OUR FORESTS GREEN

Europe's forests are paramount for our environment. Yet climate change may lead to increased forest damages. The project EUFODOS responds to this challenge with timely information to forest authorities to mitigate such risks.

Once forests covered Europe from the Arctic to the Mediterranean. Until 90 percent of the continent was covered in green. Today, more than half of this ancient forest is gone, and forest cover currently average 30 percent in Europe. Whilst deforestation has been stopped during the past decades, climate change poses a new risk for Europe's forests. Infestations and other biotic damages caused by climate change could lead to increased forest damage across the continent.

In order to mitigate this challenge, timely information on the state of our forests is demanded by European forest authorities.



Bark beetle © EUFODOS

The project EUFODOS is set to respond to this demand with a set of GMES Forest Downstream Services (FDS) in the form of forest degradation assessment and forest functions parameter mapping.

Combining data from satellites and in situ measurements in the forests, EUFODOS promises to deliver services that refine the use of existing GMES land service projects such as forest area, forest classes, forest density and forest change detection.

The FDS programme is based on 3 foundations: technical/methodological developments which will be based on an approach that combines Earth Observation (EO) and in-situ data as well as the GMES Forest Core products; the formation of a functional Service Network (SN) which includes effective representation/involvement of the user community, the service providers and the research community; and the assessment of the economic feasibility of developing the service cases such that they are sustainable.

Moreover, using remote sensing, the project also aims at producing rapid mapping of forest degradation and damage in high resolution.

Another aspect of the new services anticipated by EUFODOS is the derivation of forest functional parameters for proper planning of protection forests stability. To achieve this goal it is essential to process high resolution data which also can deliver information on vertical structure and understorey within forests. In order to fulfil these demands LIDAR technology will be used.



**MATHIAS SCHARDT**  
IS PROJECT COORDINATOR

### QUESTIONS & ANSWERS

#### What do you want to achieve with this project?

It is the aim of EUFODOS to develop specific Forest Downstream Services (FDS) that are urgently required by European users in an economically viable manner. The specific FDS are related to assessment of forest damage and mapping forest functional parameters.

#### Why is this project important for Europe?

There is a strong need of European users to gather information on forestry in a fast and reliable way after disastrous events and for planning measures. The EUFODOS pre-operational FDS are assigned to deliver methods and software which can be applied within European countries.

#### How does your work benefit European citizens?

The monitoring of forest areas is an important task in the European context in order to achieve a sustainable and efficient development. EUFODOS is delivering an operational service for the benefit of the European citizens in terms of cost-efficiency, accuracy and reliability.

**EUFODOS takes a closer look at forest damage across Europe, providing timely information to mitigate negative impacts of climate change.**

# EUFODOS

European Forest Downstream Services –  
Improved Information on Forest Structure and Damages



## LIST OF PARTNERS

- Joanneum Research, Austria
- Valitonen Teknillinen Tutkiuskeskus, Finland
- Gesellschaft für Angewandte Fernerkundung, Germany
- Albert Ludwigs Universität Freiburg, Germany
- Accademia Europea di Bolzano, Italy
- RapidEye, Germany
- Remote Sensing Application Center, Bulgaria
- Umweltbundesamt GmbH, Austria

## COORDINATOR

Joanneum Research, Austria

## CONTACT

Univ. Prof. Dr. Mathias SCHARDT

Tel: +43 316 8761754

E-mail: [mathias.schardt@joanneum.at](mailto:mathias.schardt@joanneum.at)

## PROJECT INFORMATION

European Forest Downstream Services – Improved  
Information on Forest Structure and Damages  
(EUFODOS)

Contract no: 262786

Starting date: 01/01/2011

Duration: 36 months

EU Contribution: € 2.499.723

Estimated total cost: € 3.402.150

