

# ZAPÁS

## Assessment and Monitoring of Forest Resources in the Framework of the EU-Russia Space Dialogue

### SIBERIAN INSIGHTS ON GLOBAL WARMING

In a time of climate change, the forests of Central Siberia act as valuable carbon sinks. The ZAPÁS project brings Russian and European partners together, aiming to enhance the procedures and products in the field of Earth observation for forest resource assessment and monitoring.

Forests play a pivotal part in Earth's carbon balance. Hence our ability to fully understand and quantify the impact that vast forests have on the global environment is important for the monitoring of international agreements aimed at CO2 reductions.

In Eurasia, the forests in Central Siberia are important carbon sinks. The EU and Russia share an interest in generating a better understanding of the biological processes that are at play across these immense lands.



Drought © David Hands - Fotolia.com

Earth observation data provide valuable solutions in this respect, since remote sensing from satellites enables monitoring of large and remote land areas and the production of biophysical products.

Specifically, radar satellites facilitate the generation of biomass maps. Such maps may be used to obtain information about biomass change over several years, and feed into advanced carbon accounting models.

The ZAPÁS project responds to the demand for better carbon forestry data. The project brings European and Russian researchers together, and jointly they intend to exploit the richness of Earth observation data from European and Russian satellites, such as ENVISAT MERIS and ASAR, and METEOR-M and RESURS-DK1. This collaboration is set to lead to the development of first biomass maps, and biomass change maps for the years 2007, 2008, and 2009 on a local scale, as well as improved biomass and land cover maps at regional scale. Moreover, the project will generate a 1 km scale land cover map as input to a carbon accounting model, which will facilitate improved European-Russian reporting on the implementation of the Kyoto Protocol.

Indeed, ZAPÁS' foreseen development and validation of a terrestrial ecosystem Full Carbon Account for a large area is promising.



CHRISTIANE SCHMULLIUS  
IS PROJECT COORDINATOR

### QUESTIONS & ANSWERS

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

The ZAPÁS project will speed up transition to sustainable development in European countries as well as in Russia via improving the information exchange and joining the efforts in order to increase scientific credibility of Earth Observation for the environmental sciences.

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

Russia, the European Union's largest neighbour, is considered by the European Parliament as a key player in its efforts to protect the global climate and environment. An important international agreement, to which ZAPÁS will contribute, is the Kyoto Protocol, providing mechanisms to reduce greenhouse gases and tackle global warming.

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

The intensification of collaboration between the EU and Russia on environmental issues is necessary to step forward in bringing ecological sustainability and social responsibility to the forefront in economic dealings. Such responsibility is vital in industrial investments, in cooperation on energy issues, and in the farming, forestry and fisheries sectors.

**ZAPÁS paves the way for enhanced forestry Carbon Accounting from space, joining European and Russian expertise.**

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### LIST OF PARTNERS

- Friedrich-Schiller University, Department for Earth Observation, Jena, Germany
- Internationale Institute for Applied Systems Analysis, Austria
- Space Research Institute of Russian Academy of Sciences, Russia
- V.N.Sukachev Institute of Forestry, Siberian Branch of the Russian Academy of Sciences, Russia
- Joint Stock Company "Russian Space Systems", Russia

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### PROJECT INFORMATION

Assessment and Monitoring of Forest Resources  
in the Framework of the EU-Russia Space Dialogue  
(ZAPÁS)

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