

Space for Europe?

As the EU heads into orbit, European policymakers explore the economic, environmental and technological advantages of an ambitious space policy

"Having our own state-of-the-art space policy and technology is of strategic importance to the EU"
European parliament president Jerzy Buzek

Shale gas: Alejo Vidal-Quadras, Philip Lowe, Gilles Pargneaux and Phillipe Juvin explore the risks and opportunities of the controversial energy source

Wasting away: Janez Potočnik on Europe's responsibility to reduce food waste



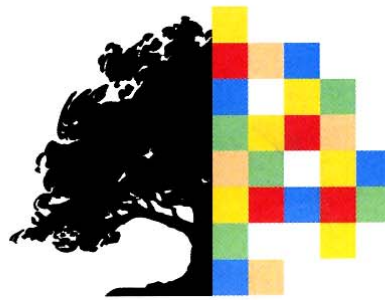
If the CAP fits: Dacian Cioloș, Paolo De Castro, José Bové, Martin Häusling and more on common agricultural policy reform

Tackling diabetes: Christel Schaldemose, Sarah Ludford, David Casa, Jean Claude Mbanya



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BIO_SOS

BIO_SOS (Biodiversity Multi-Source Monitoring System: from Space To Species; www.biosos.eu) is a response to the Call for proposals FP7- SPACE-2010-1. The main objective of BIO-SOS is the development of an operational ecological modelling system suitable for effective and timely multi-annual monitoring of NATURA 2000 sites and their surrounding areas particularly exposed to different and combined type of pressures. **Its input data sources are satellite-based measurements and in situ data. Its output products can support management decisions based on ecological status and trends according to National and EU obligations.** The output system, named *EO Data for Habitat Monitoring (EODHaM)*, will be compliant with ongoing GEOSS, INSPIRE and GMES initiatives by improving core services and providing new downstream-services.

Study areas in three Mediterranean and two Western Europe Countries are under way. To extrapolate from European test cases to a general use, additional areas are considered in two highly biodiverse, tropical countries (i.e., Brazil and India), where the Natura 2000 system does not exist, but the availability of advanced monitoring systems for supporting biodiversity conservation is particularly important. BIO_SOS is a pilot project which intends to develop novel operational methodologies beyond current state-of-the-art in Europe as:

1. high spatial resolution (HR), very high spatial resolution (VHR) and hyper-spectral resolution EO data pre-processing and understanding techniques for land cover (LC) map and LC change (LCC) map generation eligible for use in biodiversity monitoring

2. A modeling framework will be developed to combine EO and *in-situ* data supporting automatic provision of adequate indicators of biodiversity, assessment and prediction of the impacts of human-induced pressures on biodiversity using new and existing models that are able to evaluate and predict trends in biodiversity values.

BIO_SOS outputs:

- Land cover (LC)/Land Use maps (LU)
- Habitat maps: General Habitat Categories (GHCs) and Annex 1 Habitat maps
- Land Cover/Land Use and Habitat change maps
- Biodiversity Indicators
- Biodiversity Indicator trends for Biodiversity pressure scenarios.

BIO-SOS will strongly support the reporting for the CBD, the European Biodiversity Strategy and the Habitat Directive by making the information compatible and so will become central to the process of managing biodiversity in Europe.

The products generated by the BIO_SOS project will be made available for policy decision making and planning to evaluate the consequences of changes within Natura 2000 sites and their surroundings as well as to follow up impact of existing policies

The project is coordinated by CNR-ISSIA, Italy. The consortium includes 3 SMEs and 11 research institutions.

