



# BETTER COLLABORATION AND DECISION-MAKING IN ROMANIA

PRIVATE AND PUBLIC SECTOR ORGANISATIONS IN ROMANIA HAVE WORKED TOGETHER TO BUILD THE COUNTRY'S ITS OWN NATIONAL SPATIAL DATA INFRASTRUCTURE. CRISTIAN VASILE AND CRISTINA OANA DISCUSS ITS CREATION AND SOME OF THE PROJECTS THAT HAVE BENEFITTED FROM THE NSDI

Romania has a long experience with geospatial information. The former Military Geographic Institute, now the Military Topographic Directorate (DTM), was established in 1859 and was the first of its kind in this part of Europe. Important investments in infrastructure and economy, starting between the two World Wars and continued in the post-war period, focused on the efficient use of spatial data. Standards for geographic information became more important and Romania was an active member in ISO/TC211 since its inception.

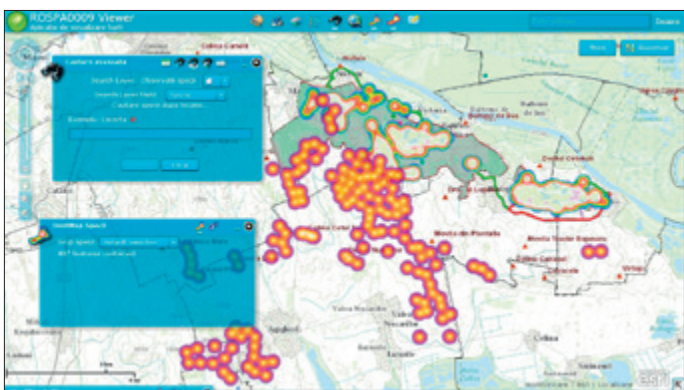
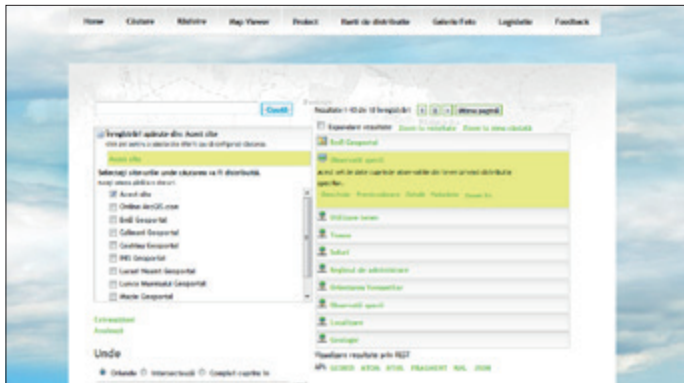
Since Romania started along the road to joining NATO and then preparing for admission to the European Union, which it achieved in 2007, many projects have involved the development of geospatial databases. Today, most GIS specialists are aware that problems of data heterogene-

ity, inconsistent standards and lack of a common spatial information repository can have the most serious consequences for the understanding of the spatial data content and hence for decision making. Information has to be accessible to all interested parties and closely integrated with other relevant sources of information. This article shows how Romania has addressed these challenges through a collaborative effort by both the public and private sectors when building its National Spatial Data Infrastructure (NSDI), which includes key geospatial datasets.

## INSPIRE

INSPIRE has been an important catalyst for establishing the Romanian NSDI. The transposition of the INSPIRE Directive 2007/2/EC into Roma-





Overview of Bestepe Protected Sites Geoportal (<http://bio.geoportal-mediu.ro/geoportalbestepe/>)

node – a fully-fledged INSPIRE Geoportal built on the ArcGIS platform. This new node will be federated with the Romanian INSPIRE Geoportal developed by ANCP and will add more content and functionality, as new INSPIRE data themes are added such as orthoimagery and elevation data.

### Biodiversity

Another important component of the NSDI is related to biodiversity. Starting 12 years ago with the delimitation of protected areas, the Ministry of Environment and Climate Change has had sustained activity in this area.

“It is not only our contribution to the INSPIRE-related databases, but also a possibility for biologists, urban and rural planners, environmentalists and NGOs, to access and use biodiversity data, as well as allowing them the possibility to contribute to data updating and correcting. Standardising spatial information and the collection of biodiversity data is essential, especially for complex investment projects where nature conservation plays an important role,” says John Smaranda, INSPIRE coordinator in the Ministry of Environment and Climate Change.

As a response to the EU Directives regarding reporting on biodiversity conservation in all Member States Protected Areas (Article 6, Habitats Directive, 1992; Articles 9 and 12, Birds Directive, 2009), assessing the need for biodiversity information has also been addressed by scientists and managers of the National Parks and Protected Sites. A simple, efficient and cost-effective spatially enabled information system

for the biodiversity management has been created, based on a three-tier architecture framework. This can be successfully implemented at the local, regional and national levels. The methodology is focused on the development of a centralised standard tool to integrate the most efficient field methods, mobile applications and equipment, adequate data analysis methods, a biodiversity enterprise data model to store data, and a collaborative platform for sharing and disseminating the results through Geoportal applications. Using a nested hierarchy, it allows collecting information at different scales to report on gains and losses in biodiversity across different areas of responsibility. Each tier includes indicators, measures, and monitoring and reporting tools that are intended to operate at a range of scales.

A complete e-reporting system, called SIMSHAB (Information System for Species and Habitats Monitoring), available at [www.simshab.ro](http://www.simshab.ro), was implemented by a consortium for the National Institute of Biology. This national project has already made significant progress to support Romanian legal reporting obligations on the Habitats and Birds Directives as well as international environmental policies and legislation.

As a further focus, all these shared environmental information systems are tied to SIMSHAB in terms of shared environmentally-related data and information, and are consistent with INSPIRE requirements.

### Conclusion

Challenges must still be resolved, but a mature next release of the Romanian INSPIRE Geoportal will produce tremendous benefits for Romanian society and its NSDI implementation. The deployment of the next release will improve knowledge sharing, reduce duplication of efforts, direct people toward the best available data, and improve the overall quality of geospatial data and information of the NSDI.

Romania has a rich heritage of involvement in the geospatial domain. Today those earlier efforts are being brought together in its NSDI. It provides the technology platform for applying the power of geographic thinking to social, economic and environmental challenges. Most importantly, however, it provides a platform for better collaboration enabling people to work across organisations to solve problems of mutual concern.

## ROMANIA HAS A RICH HERITAGE OF INVOLVEMENT IN THE GEOSPATIAL DOMAIN. TODAY THOSE EARLIER EFFORTS ARE BEING BROUGHT TOGETHER IN ITS NSDI

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### ENVIRONMENTAL GEOPORTAL APPLICATIONS

Some of the environmental Geoportal Applications available online are:

**Calimani National Park:** <http://bio.geoportal-mediu.ro/geoportalcalimani>

**Siriu Protected Area:** [www.geoportal-mediu.ro/geoportal/](http://www.geoportal-mediu.ro/geoportal/)

**Protected Lakes of Neamt County – Pangarati, Cujejel and Vaduri:** [www.geoportal-mediu.ro/geoportalneamt/](http://www.geoportal-mediu.ro/geoportalneamt/)

**Ceahlau National Park:** [www.geoportal-mediu.ro/geoportalceahlau/](http://www.geoportal-mediu.ro/geoportalceahlau/)

**Lunca Muresului Natural Park:** <http://lm.geoportal-mediu.ro/geoportal/>

**Macin Mountains National Park:** <http://bio.geoportal-mediu.ro/geoportalmacin>

**Balta Mica a Brailei Natural Park:** <http://bio.geoportal-mediu.ro/bmb>

**Bestepe Mahmudia and Bestepe Natural Reservation:** <http://bio.geoportal-mediu.ro/geoportalbestepe/>

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