

Bulgarian Protected Areas GIS in Internet

Point Of Contact:

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Rationale:

Bulgarian Protected Areas GIS in Internet information node is a web application, which visualizes GIS maps and associated data/information about Bulgarian protected areas via Internet and performs specific GIS services and queries. The **official protected areas management plans**, which are developed for most of the protected areas in Bulgaria, are the base of the Bulgarian web application. At the moment, data about the Vitosha mountain close to Sofia, a preferred natural park and touristic area, are provided.

The Bulgarian protected Areas GIS in Internet information node is a part of the pan – European protected areas GIS network – NATURE – GIS.

A demonstration prototype of the web application has been developed, which can be explored at <http://gis.biodiversity.bg>. The main application presented will be the use of the information by tourists who want to explore the Vitosha mountain close to Sofia.

Aims:

The main aim of the information node is to be a reliable help tool in the management of the protected areas and to inform the public about data and information about protected areas.

Additional aims are:

- a) improvement of the access to reliable information for the public and for the persons and institutions working in the field of protected areas management;
- b) exchange of GIS data/information with other European countries, taking part in the establishment of the network.

Addressed users:

- people and institutions involved in the protected areas management (MOEW)
- NGOs
- scientific researchers
- broad public audience

The main application will be providing information to tourists and hikers in protected areas, and in particular in the Vitosha mountain.

Geographic Area:

Bulgaria

Data, Feature Types and web services:

WFS, WMS, PHP, XML, GML, PHTML, HTML, web service

Architecture:

I. Structure of the web application

The information node is structured in 3 levels:

First level

On this level are situated:

- the map of Bulgaria with basic GIS information
- The boundaries of the protected areas in Bulgaria. Currently the Vitosha Nature Park is available for demonstration purposes. Clicking on the spot of the Vitosha Nature Park opens the second level.

See sample here: <http://gis.biodiversity.bg/vitosha.phtml>

Second level

This level gives the chance to be chosen the layer or combination of layers with maps and other related GIS information. At this level should be performed the main tasks and queries.

See sample here: <http://gis.biodiversity.bg/vitosha.phtml?zona=bulgaria>

Third level

At this level a given object from the second level can be explored in more details. In our case, for demonstration purposes, the park Bistrishko Branishte is such an object. First, the layer, containing the object (in our case this is "parks") should be chosen. Clicking on it opens the third level. Many objects could be placed within the layers on the second level and all they could be clickable, giving the chance to explore more detailed maps and information, in relation to the object.

See sample here: <http://gis.biodiversity.bg/vitosha.phtml?zona=vitosha>

II. The following schema describes the technology and the components of the Information Node.

<http://gis.biodiversity.bg/shema.jpg>

Screenshots:



Functions:

A. Visualization of GIS maps and associated data/information

B. Performing specific GIS services and queries concerning the management of the protected areas

1. Defining the conservation status

2. Zoning

3. Development of action plans for implementing the protected areas management plans

4. Protected areas monitoring

5. Ecological assessment

6. Defining and management of protected zones in NATURA 2000 and the territories from the agriculture management plans.

7. Violations

All these functions will be performed through combination of layers contain specific information. For example in order to be defined the conservation status of a given protected area are needed the following layers:

- conservation important plants
- conservation important animals
- conservation important forests
- conservation important habitats

The needed layers are defined for all of the above mentioned functions (1 -7), as well as the way they should be combined in order to be possible to be made analyzes and conclusions.

URLs:**Web services:**

WMS URL(using Bulgaria map file):

<http://mapserv.netharvest.org/cgi-bin/mapserv?map=/www/mapserver/bulgaria.map&SERVICE=WMS&VERSION=1.0.0&request=getcapabilities>

WFS URL(using Bulgaria map file):

<http://mapserv.netharvest.org/cgi-bin/mapserv?map=/www/mapserver/bulgaria.map&SERVICE=WFS&VERSION=1.0.0&request=getcapabilities>

The rest of the Map Files:

</www/mapserver/vitosha.map>

</www/mapserver/branishte.map>

The WMS client, which is used for testing:

<http://cgdi-dev.geoconnections.org/prototypes/owsview/index.html>

Web application:

<http://gis.biodiversity.bg>

Problems:

<description of the difficulties encountered (and possibly how they were solved) >

Recommendations:

<with the experience you gained in deploying your interoperable web services, provide recommendations to other potential members of the Nature-GIS network>