

Petra Štrbenac, State Institute for Nature Protection, Head of the IT Section



WEB SERVICES/DATA
PUBLISHED AND USED BY SINP

2007-2008 Staff Services Committee Report
 Protected Areas Grants
 Proposal of Marine Conservation Initiative
 Habitat Loss of Florida
 OCEP/NOAA Species Findings/Recommendations
 OCEP/NOAA Species Findings/Recommendations

Administrative services providers
 Workplace safety hygiene (Source: IFA)
 National WHS Ltd. (Tel: 1800 1 363 536) (Source: IFA)
 BTH - Workplace Hygiene (Source: IFA)
 Tropicare (Tel: 2 233 000) (Source: SGA)
 Tropicare (Tel: 2 25 940) (Source: SGA (Specialist WHS))
 Control (regulator of suppliers) (Source: IFA)
 WHS (Source: SGA (Specialist WHS))



State Institute for
Nature Protection



ABOUT STATE INSTITUTE FOR NATURE PROTECTION



State Institute for
Nature Protection

The State Institute for Nature Protection is the central institute dealing with expert tasks of nature conservation in Croatia.

The Institute was established by virtue of a Regulation of the Government of the Republic of Croatia adopted on 30 October 2002, according to National Strategy and Action Plan (NN 81/99) and Implementation Plan on Stabilization and Association Agreement and began its operations in September 2003. The State Institute for Nature Protection carried out a series of activities aimed at ensuring the lasting conservation and improvement of Croatia's natural heritage. More info www.dzzp.hr

MAIN ACTIVITIES AND OBLIGATIONS

- inventory of species and habitats;
- monitoring and assessing the state of nature;
- preparing expert base proposals for the protection of natural values;
- preparation and implementation of EU funded projects (IPA, PHARE, Life, CARDS);
- managing protected areas and the use of natural resources;
- developing expert base proposals for the assessment of acceptability of interventions in nature; reporting on the state of nature;
- publishing expert and educational publications;
- participation in the implementation of international agreements on nature protection and organizing and implementing educational and promotional activities in nature protection
- maintenance of Nature Protection Information System;

data collection, storage, i

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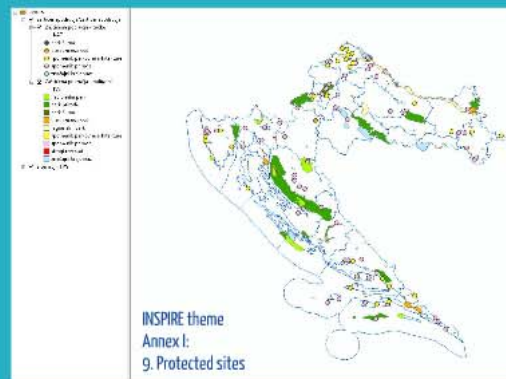
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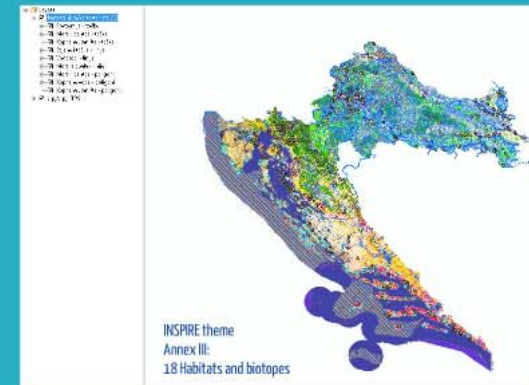
data collection, storage, maintenance and analysis

SPATIAL DATA MAINTENANCE

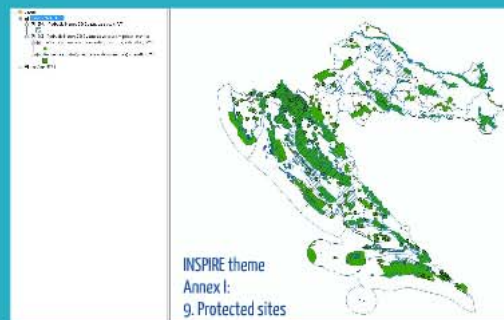
Protected areas in Croatia



Habitat map of Croatia



Ecological network and Natura 2000 sites proposal



Species occurrences and protected species distribution areas

INSPIRE theme
Annex III:
19 Species distribution



GIS
Geodatabase: ArcGIS
Server: ArcGIS Server
Desktop: ArcGIS Info

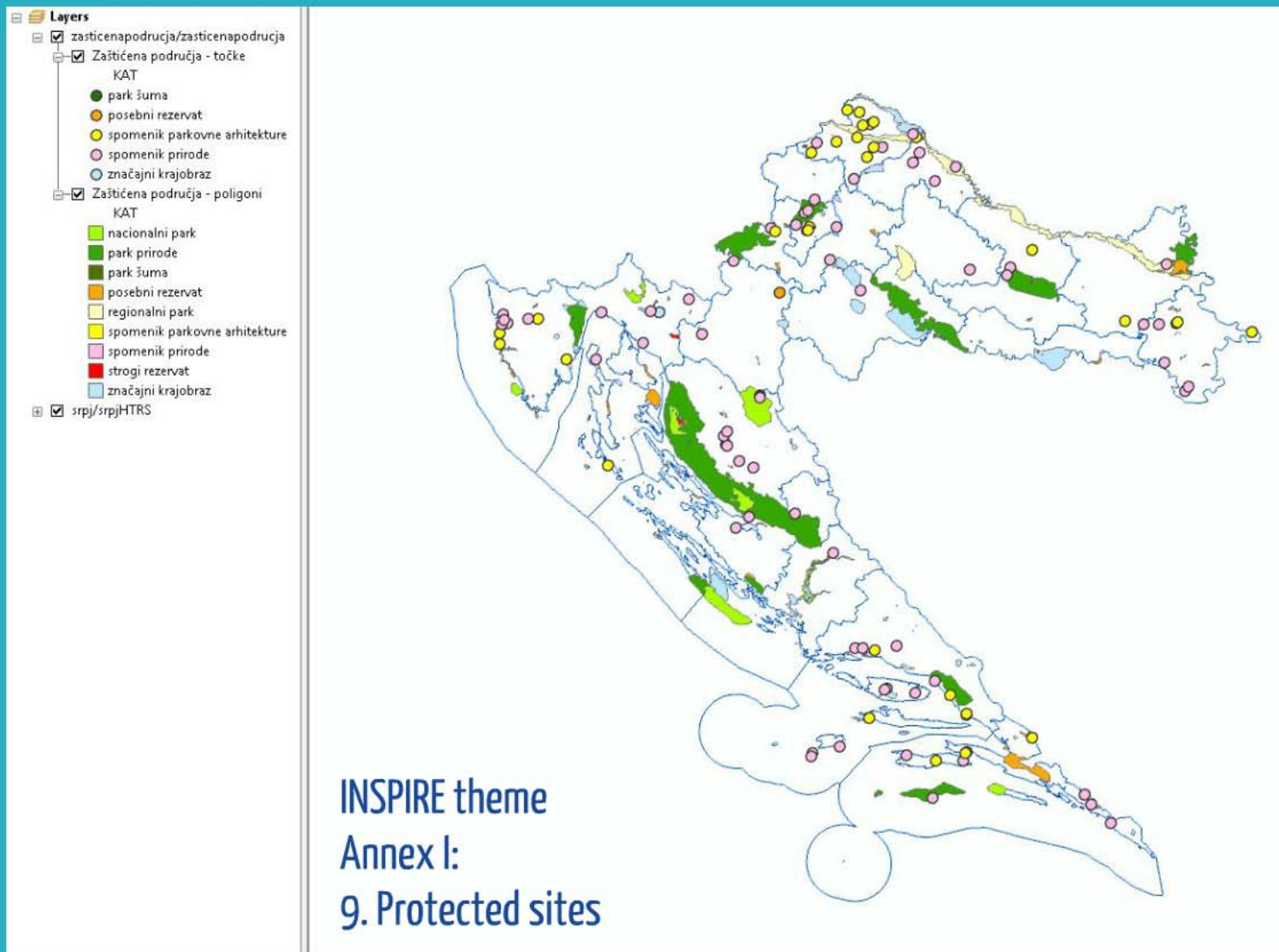
MICROSOFT SQL



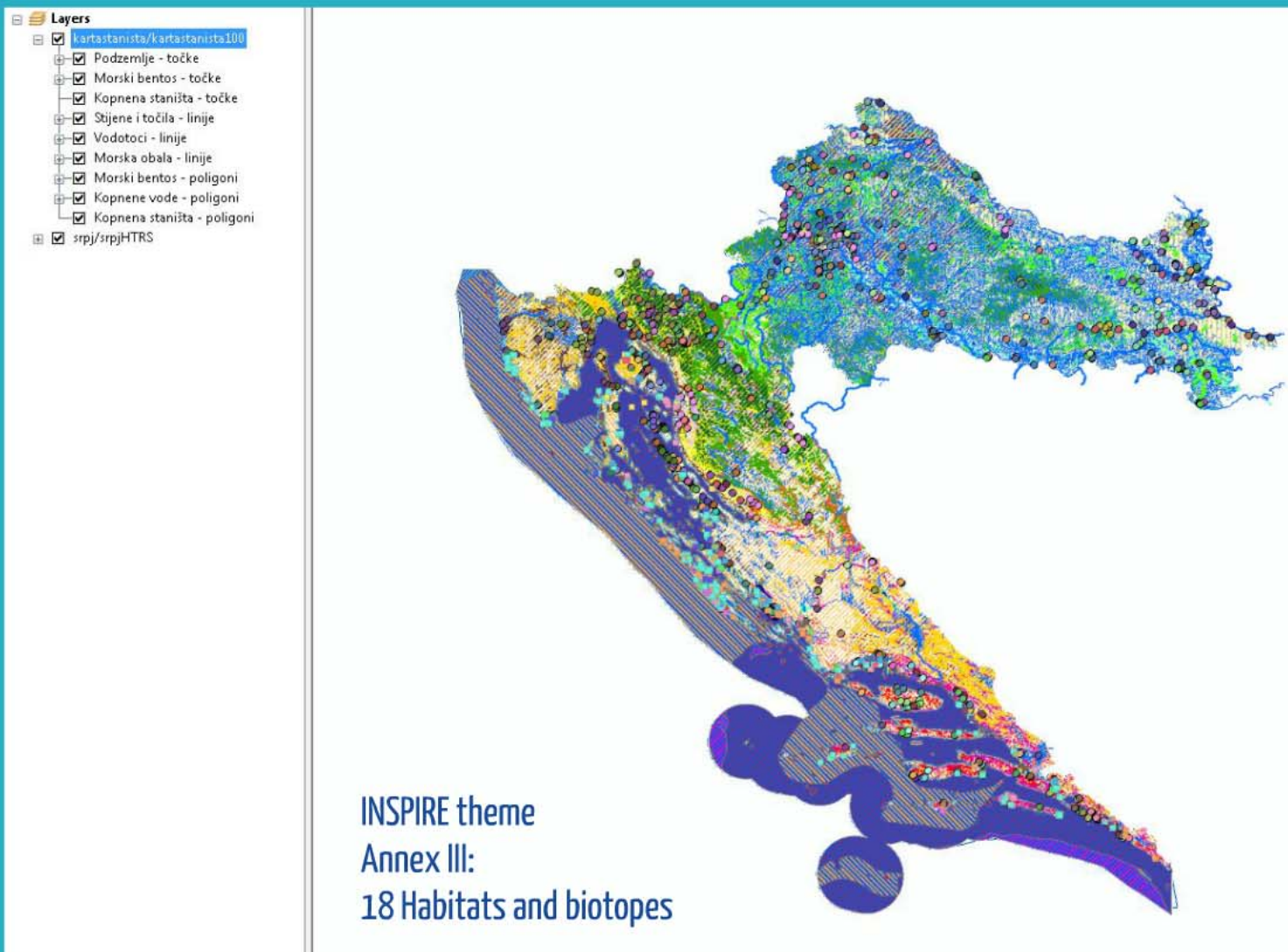
RDBMS/GIS OPEN SOURCE
RDBMS: PostgreSQL
Geodatabase: PostGIS
Server: MapServer

d analysis

Protected areas in Croatia



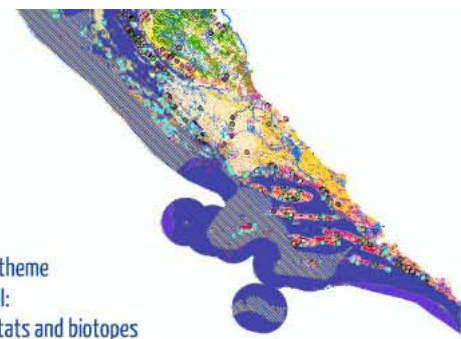
Habitat map of Croatia



INSPIRE theme
Annex I:
9. Protected sites



INSPIRE theme
Annex III:
18 Habitats and biotopes



Ecological network and Natura 2000 sites proposal

INSPIRE theme
Annex I:
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INSPIRE theme
Annex I:
9. Protected sites

Species
occurrences
and protected
species
distribution
areas

INSPIRE theme
Annex III:
19 Species distribution

CURRENT RDBMS/GIS IMPLEMENTATION SOFTWARE

GIS



Geodatabase: ArcGIS SDE (Spatial Database Engine)

Server: ArcGIS Server .NET Standard 10

Desktop: ArcGIS Info/Editor/View 9.3.1/10.

RDBMS

MICROSOFT SQL SERVER 2008



RDBMS/GIS OPEN SOURCE EXPERIENCE

RDBMS: PostgreSQL

Geodatabase: PostGIS

Server: MapServer, GeoServer

data publishing, sharing and consuming

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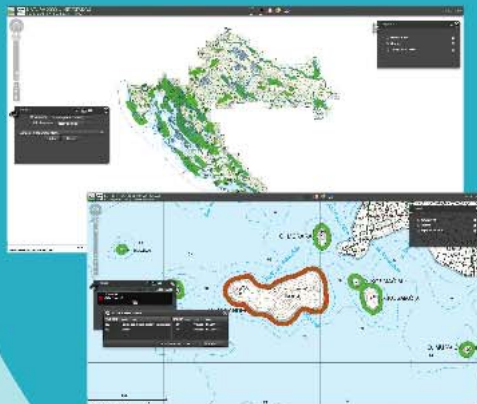


PUBLISHING & SHARING SPATIAL DATA

WEB MAP APPLICATIONS

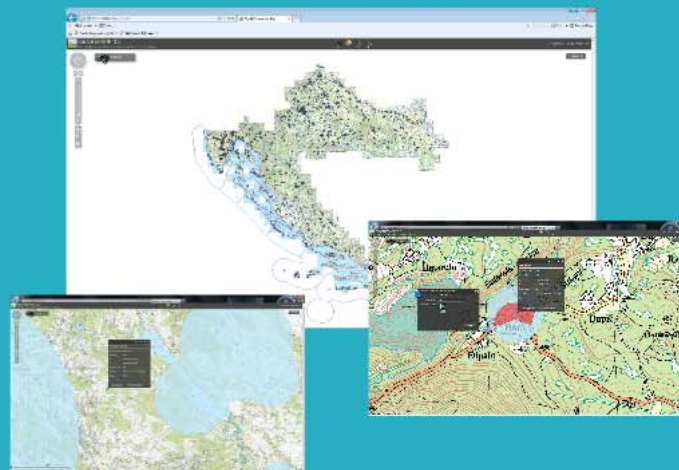
PUBLISHED WEB SERVICES (WMS/WFS)

Proposal of Natura 2000 sites in Croatia
www.natura2000.hr



Georef

Application for georeferencing literature data



More info and links on www.dzpz.hr



DEM - altitude/aspect/slope
Topographic map 1:100 000 (SGA)
Topographic map 1:25 000 (SGA)
Central register of spatial units
DOF (Source: SGA Geoportal WM)
Croatian Base Map (Source: SGA)
Digital cadastre (Source: SGA)

Alignment with INSPIRE
• Publishing OGC
• Using EU comp
• Metadata
• Development of



EU FUN

IPA 2010 FPI
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EuropeAid/1

IPA 2007 TA
databases (I
Information

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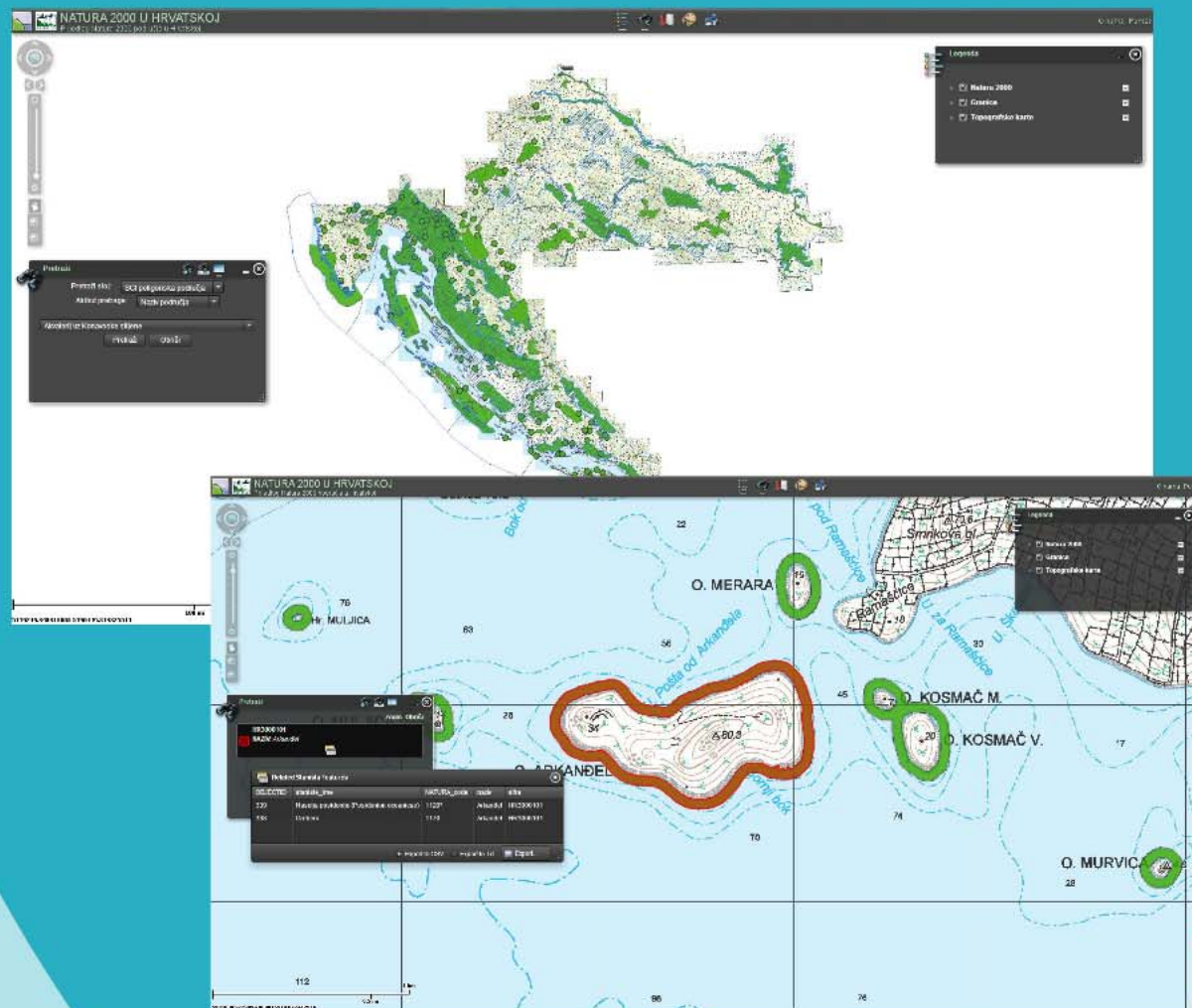
HOW CLOSE ARE WE TO INSPIRE?

INSPIRE Directive common principles:

- Data should be collected only once and kept where it is maintained most effectively

Proposal of Natura 2000 sites in Croatia

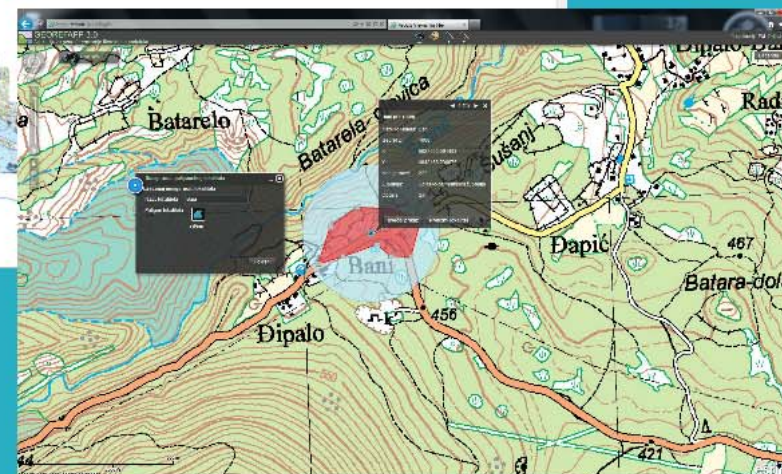
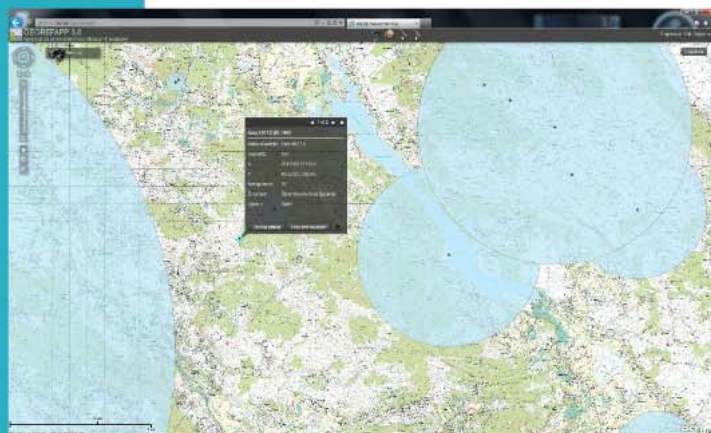
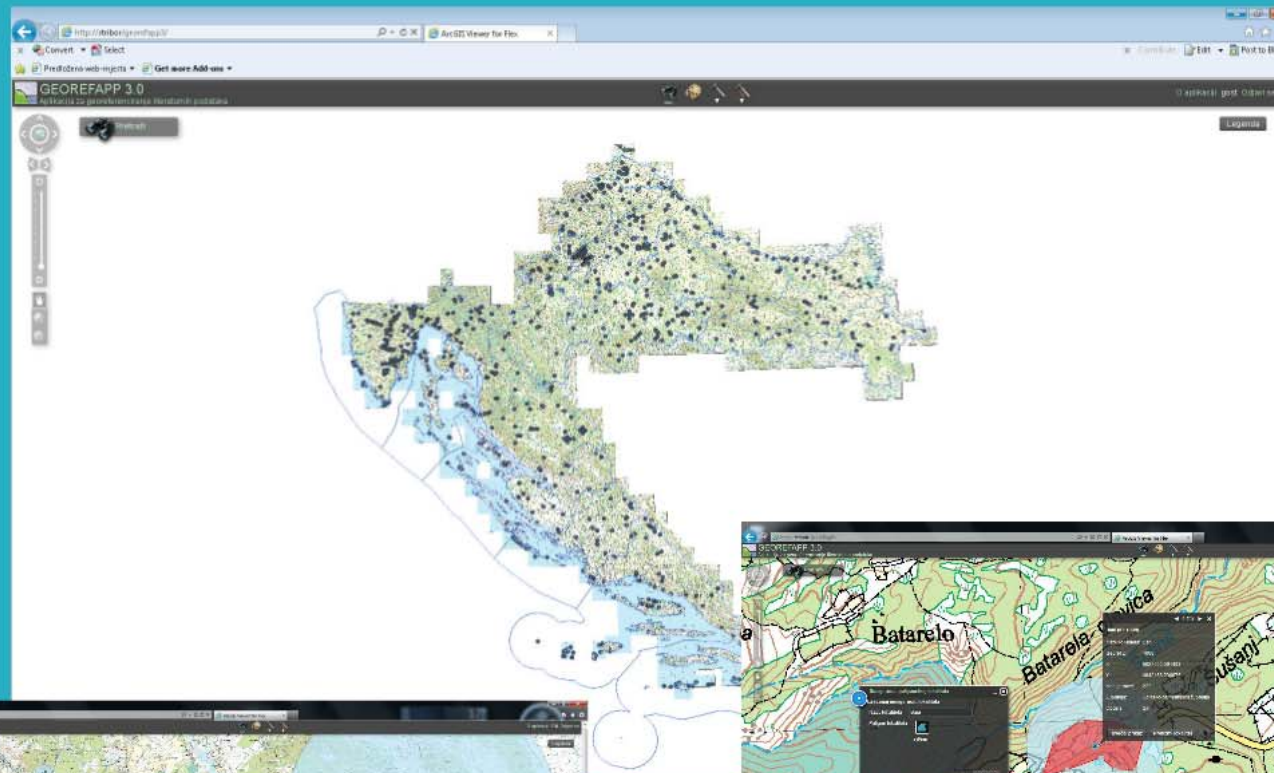
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More info

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The screenshot displays the homepage of the State Institute for Nature Protection (DZZP). The website features a blue header with navigation links: Hrv, Eng, About us, Contact, Photo galleries, Useful links, and Glossary. The main content area is divided into several sections:

- Left Sidebar:** A vertical menu with green buttons for: Events, News, Species, Habitats, Geoheritage, Protected areas, Managing protected areas, Ecological Networks, Nature Impact Assessment, Introduction and reintroduction, Nature Protection Measures, Nature Protection Information System, Projects financed from EU funds, Catalogue of information, Publications, and Regulations.
- Main Content Area:**
 - Databases and web maps:** Includes a section for **Natura 2000** with a description of the network and a **Read more** link. Below it is a section for the **Protected Area Management System (PAMS) in the Republic of Croatia**, describing the project's implementation from 2006 to 2009, with another **Read more** link.
 - Habitat map:** A section describing a GIS database on the distribution of individual habitat types in Croatia, with a **Read more** link.
 - Map of Wetland Habitats of the Republic of Croatia:** A section with a map thumbnail and a **Read more** link.
- Right Sidebar:**
 - Search Engine:** A search bar with an **OK** button and a **Detailed search** link.
 - Kalendar događanja:** A calendar for **STUDENI 2012** showing dates from 1 to 31.
 - Projects:** A section featuring a **NATURA 2000** logo and a photo of a **Velike potpune izopetke**.

WEB SERVICES/DATA PUBLISHED AND USED BY SINP

Desktop GIS, Web Map /Applications

SINP Published Services (available to public in 2013):

- Protected Areas in Croatia
- Proposal of Natura 2000 sites in Croatia
- Habitat map of Croatia
- CRO Fauna - species findings/occurrences
- CRO Speleo - speleological objects

Used external services and data:

- Bio-geographical regions (Source: EEA)
- National Grid 1x1, 2x2, 10x10, 50x50, 100x100 (Source: EEA)
- DEM - altitude/aspect/slope (Source: SGA)
- Topographic map 1:100 000 (Source: SGA)
- Topographic map 1:25 000 (Source: SGA Geoportal WMS)
- Central register of spatial units (Source: SGA)
- DOF (Source: SGA Geoportal WMS)
- Croatian Base Map (Source: SGA Geoportal WMS)
- Digital cadastre (Source: SGA)

SHARING

ASSURING COMPLIANCE WITH EU INSPIRE DIRECTIVE

Alignment with INSPIRE common principles and guidelines:

- Publishing OGC compliant web services (WMS/WFS)
- Using EU compliant Coordinate System HTRS96
- Metadata
- Development of NPIS web portal

ArcGIS for INSPIRE



EU FUNDED PROJECTS RELATED TO INSPIRE

IPA 2010 FPP RAC Project "Development of Habitat Types Database (CRO Habitats) as Part of Nature Protection Information System (NPIS)", EuropeAid/127054/C/SER/multi (2012/2013)

IPA 2007 TAF Project "Development of faunistic and speleological databases (CRO Fauna and CRO Speleo), as part of NPIS (Nature Protection Information System)", EuropeAid/128077/D/SER/HR (2011/2012)

Development of Nature Protection Information System
Web Portal (In line with EU INSPIRE Directive)

HOW CLOSE ARE WE TO INSPIRE?

INSPIRE Directive common principles:

- Data should be collected only once and kept where it can be maintained most effectively. > **Centralized data maintenance in scope of Nature Protection Information System**
- It should be possible to combine seamless spatial information from different sources across Europe and share it with many users and applications. > **Coordinate System HTRS96; Publishing OGC compliant web services**
- It should be possible for information collected at one level/scale to be shared with all levels/scales; detailed for thorough investigations, general for strategic purposes. > **Set up of NPIS web portal, allowing different levels of access (information detail)**
- Geographic information needed for good governance at all levels should be readily and transparently available. > **Set up of NPIS web portal, publishing OGC compliant web services**
- Easy to find what geographic information is available, how it can be used to meet a particular need, and under which conditions it can be acquired and used. **Set up of NPIS web portal, publishing OGC compliant web services, metadata**

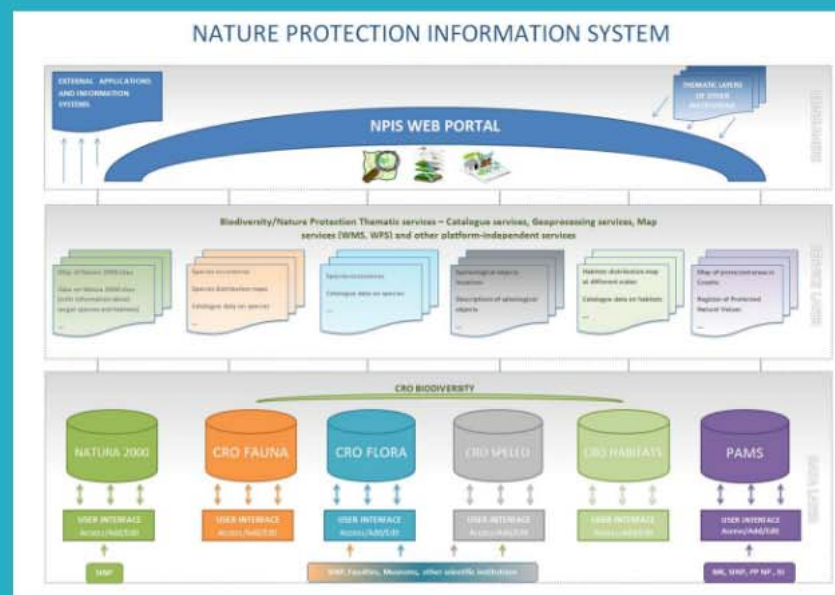


Nature Protection Information System

NATURE PROTECTION INFORMATION SYSTEM

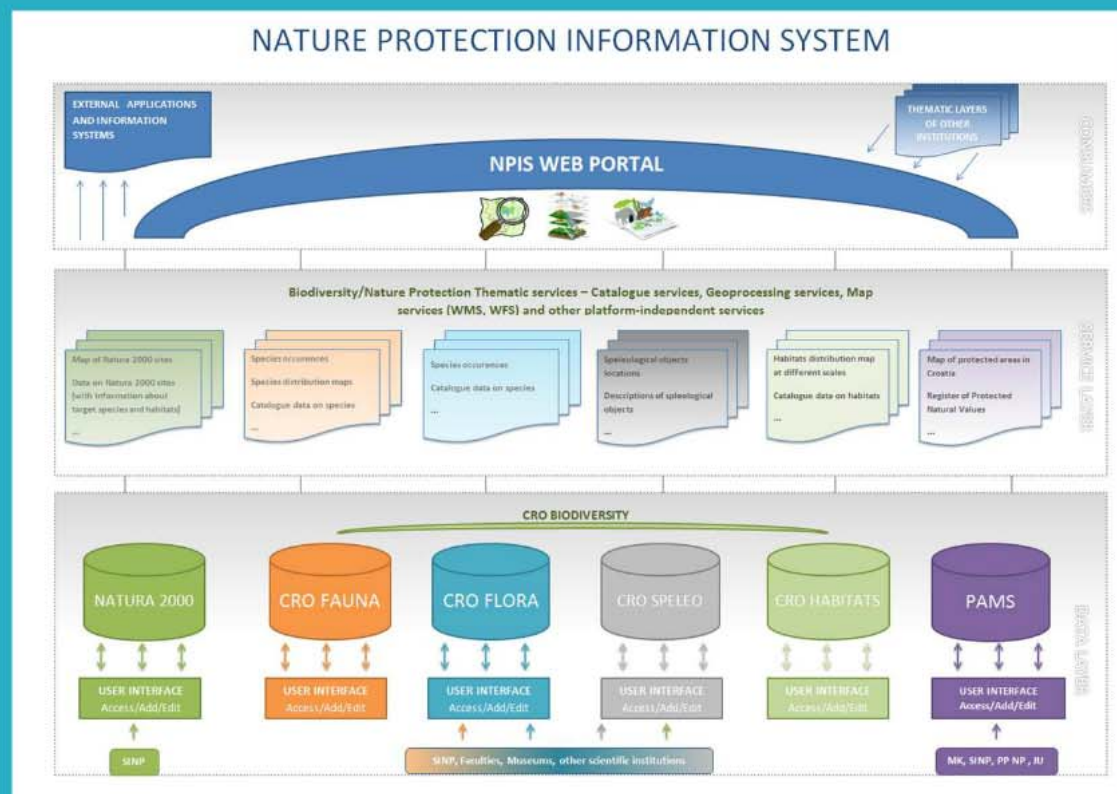
Nature Protection Act (Art. 68): The State Institute for Nature Protection keeps the Nature Protection Information System (NPIS) as part of a single information system of the Ministry, according to internationally accepted standards and obligations.

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THE CONCEPT



Nature Protection Information System Web Portal (Planned for 2013)

FUTURE PLANS FOR NPIS DEVELOPMENT

NPIS WEB PORTAL SET UP

General idea

All the available spatial and non-spatial data stored across various distributed databases and maintained by SINP in scope of NPIS is envisaged to be made available to the public through the central NPIS web portal in order to ensure a unique point of access to the accurate, validated and up-to-date information regarding biodiversity and nature protection in Croatia.

NPIS Web portal development - Planned for 2013 - SINP already prepared portal specification and tender documentation

NPIS web portal objectives

- provide set of tools and functionalities for browsing data (both attribute and spatial data), conducting queries, overlapping layers
- ensuring access to all available verified biodiversity and nature protection related data
- published data aligned with relevant EU standards and directives (INSPIRE Directive, EIONET guidelines and standards)
- provide the best experience, be accessible to the largest possible number of users, across a wide range of computing equipment, operating systems and/or browser software.

EXPLORING OPEN-SOURCE AS RDBMS/GIS IMPLEMENTATION SOFTWARE

Reasons:

- Very high costs of commercial RDBMS/GIS software maintenance and licenses
- Availability of adequate free open-source RDBMS/GIS software solutions

Main prerequisites

Ensuring regular funds for NPIS maintenance

Ensuring regular software maintenance (open-source?)

Ensuring education of technical administration personnel

Ensuring access to State Geodetic Administration base maps/data (Topographic maps; DOF; CBM etc.) and vector data (CRSU) via web services



Portal (Planned for 2013)

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THANK YOU

www.dzzp.hr