

PRIMORSKO-GORANSKA COUNTY



PUBLIC INSTITUTION

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J A V N A U S T A N O V A



ZAVOD ZA PROSTORNO UREĐENJE

PRIMORSKO-GORANSKE ŽUPANIJE

# ***SPATIAL DATA INFRASTRUCTURE DEVELOPMENT IN PRIMORSKO-GORANSKA COUNTY***

**Prof. Mladen Črnjar PhD**

**Adam Butigan, geod.eng.**

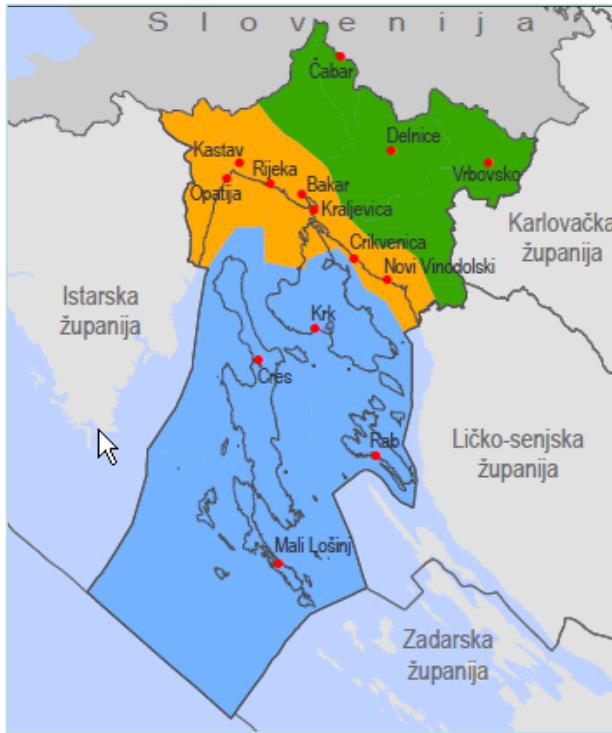
***PI INSTITUTE FOR PHYSICAL PLANNING  
OF PRIMORSKO-GORANSKA COUNTY***



# PRESENTATION CONTENTS

- ✓ *Basic information on the County and Institute for Physical Planning of Primorsko-Goranska County*
- ✓ *Development of GIS and SDI in the county*
- ✓ *Application of realized GIS projects in the county*
- ✓ *Collaboration with State Geodetic Administration*

# ABOUT COUNTY AND INSTITUTE



Land area = 3,587 km<sup>2</sup>  
Sea area = 4,345 km<sup>2</sup>  
Population = 305,505  
Population density:  
87 inhabitants/km<sup>2</sup>

- ✓ *From the foundation of the County in 1993 till the end of 2007: Administrative body “County Institute for Physical Planning and Sustainable Development”*
  
- ✓ *Since 1 Jan. 2008 Public Institution “Institute For Physical Planning of Primorsko-Goranska County” (Physical Planning and Building Act)*

# IMPORTANT PROJECTS (1)

- ✓ *Production of expert bases for the preparation of the NEW Spatial Plan of PGC (Analyses of tourist zones, commercial zones, etc.)*
- ✓ *2nd Amendment to the PGC Spatial Plan*
- ✓ *Spatial-Traffic Study of the Integral Traffic System of Primorsko-Goranska County and City of Rijeka*
- ✓ *County Sports Center Platak*
- ✓ *LNG terminal*
- ✓ *Construction of gas distribution network of PGC*

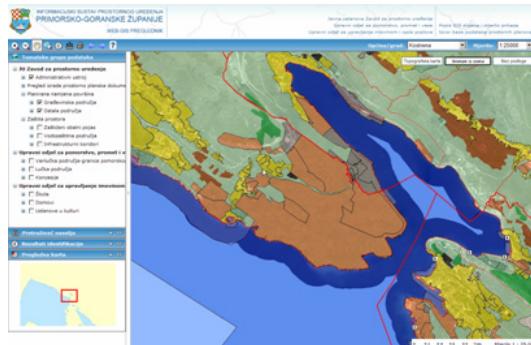


# IMPORTANT PROJECTS (2)

## Information systems

- ✓ *GIS base of spatial plans of cities, towns and municipalities* [www.gis.pgz.hr](http://www.gis.pgz.hr)
- ✓ *Register of Spatial and Urban Planning Schemes* [www.zavod.pgz.hr](http://www.zavod.pgz.hr)
- ✓ *Foundation of the Information-Communication Centre of Adriatic Euroregion Project*
- ✓ *Integration of physical planning acts and documents in a single georeferenced system*

The screenshot shows the homepage of the Zavod za prostorno uređenje (Spatial Planning Office) of the Primorsko-Goranska County. It features a map of the county, a navigation bar with links like 'O nama', 'PROSTORNI PLANCI', 'STANJE U PROSTORU', 'PROJEKTI', 'INFORMACIJE', 'SURADNJA', and 'NOVOSTI'. Below the map, there's a section titled 'ZAVODNI GABRIJAL' with links to various reports and maps. At the bottom, there's contact information and a link to the 'Mapa sveta'.



# **DEVELOPMENT OF GEOGRAPHIC INFORMATION SYSTEM IN PGC<sup>(1)</sup>**

***Formal beginning in 1995***

*“Information on the drafting of the Current Status of County’s Space Report, programme of measures and Spatial Plan of Primorsko-Goranska County” - County Assembly*

*Defined plan of development of Geographic Information System in Primorsko-Goranska County, as basis for the production of County Spatial Plan.*

# DEVELOPMENT OF GIS IN PGC <sup>(2)</sup>

## *Defining of County's Spatial Data Infrastructure in 2002*

*“Information on spatial management in regional and local self-government and application of GIS technology in PGC” - County Assembly*

- ✓ *collaboration between the Institute and Ministry of Environmental Protection and Physical Planning on the integration of data created while producing spatial plans of counties*
- ✓ *recognized need for the creation of an integral information system of physical planning in RoC*
- ✓ *recommendation to LSUs in the area of PGC to apply GIS technology to monitor the current status in their space and to join the county GIS system.*

# DEVELOPMENT OF GIS IN PGC <sub>(3)</sub>

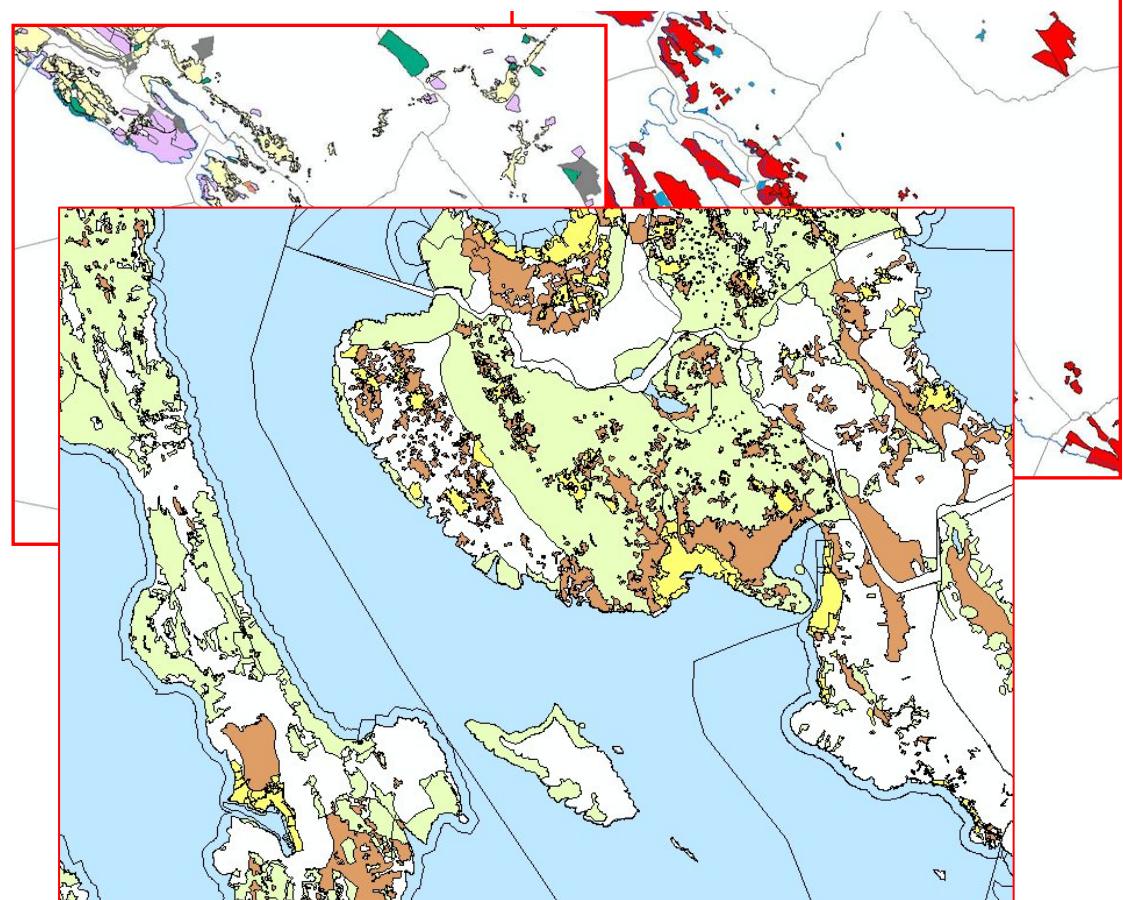
*Physical Planning and Building Act was adopted in 2008*

- ✓ *Formally defined construction of the Information System of Physical Planning in the Republic of Croatia*
- ✓ *Defined - objective - participants - content - requirement to deliver and exchange data among participants*
- ✓ *It is necessary to define standards for the production and change of data*

# RESULT

## CONSTRUCTED PART OF PHYSICAL PLANNING INFORMATION SYSTEM

PPUOG_spojene_baze_11_09.mdb
gradjevinska_podrucja
gradjevinska_podrucja_5000_poligoni
gradnja_izvan_gradjevinskog_podrucja
gradnja_izvan_gradjevinskog_podrucja_poligoni
gradnja_izvan_gradjevinskog_podrucja_tocke
infrastruktura
energetski_sustav_linije
energetski_sustav_tocke
otpad_tocke
posta_i_telekomunikacije_tocke
promet_gradjevine_linije
promet_linije
promet_tocke
telekomunikacije_linije
vodnogospodarski_sustav_linije
vodnogospodarski_sustav_poligoni
vodnogospodarski_sustav_tocke
namjena_povrsina
namjena_povrsina_linije
namjena_povrsina_poligoni
namjena_povrsina_tocke
opci_podaci
drustvene_djelatnosti_tocke
obalna_linija_linije
teritorijalne_granice_poligoni



# GIS DATABASE OVERVIEW

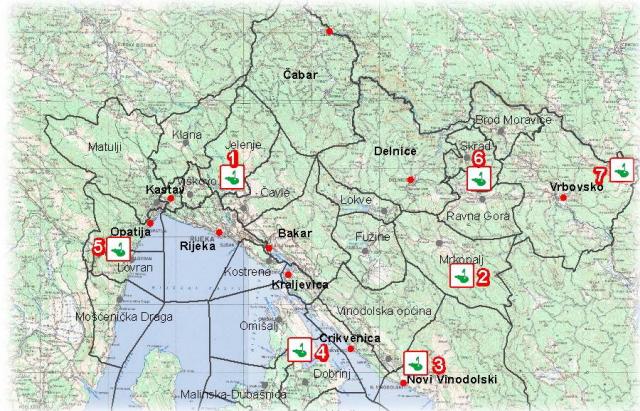
LSU – local self-government unit  
 EIA - environmental impact assessment study  
 PCA – protected coastal sea area

Public Institution Institute for Physical Planning of Primorsko-Goranska County							
Data group	Subgroup	Data	Original scale	Data format	Data location	Legal status	Produced/ Updated/ Underway
spatial data	Administrative and statistical divisions	area of PGC, LSU, statistical settlements	1:25000	GIS - gdb	server (locally) + web in PGC	public data	updated
	Documentation	geodetic network of maps, register of spatial and other documentation (EIA), PCA	1:200000 1:100000, 1:25000, 1:5000	GIS - gdb	server (locally) + web in PGC	public data	partially updated
	Environment protection	natural heritage	1:100000	GIS - gdb	server (locally) + web in PGC	public data	2004
		cultural heritage	1:25000	GIS - gdb		public data	2004
		soil: vegetation, geotechnics, pedology	1:50000- 1:100000	GIS - cov			
		sea: submarine flora and sediments	1:50000	GIS - cov		server (locally)	



# APPLICATION

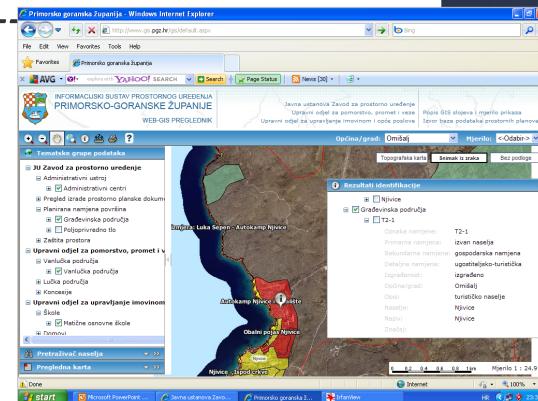
*Production of physical planning documents  
and environmental protection documents  
- initial data*



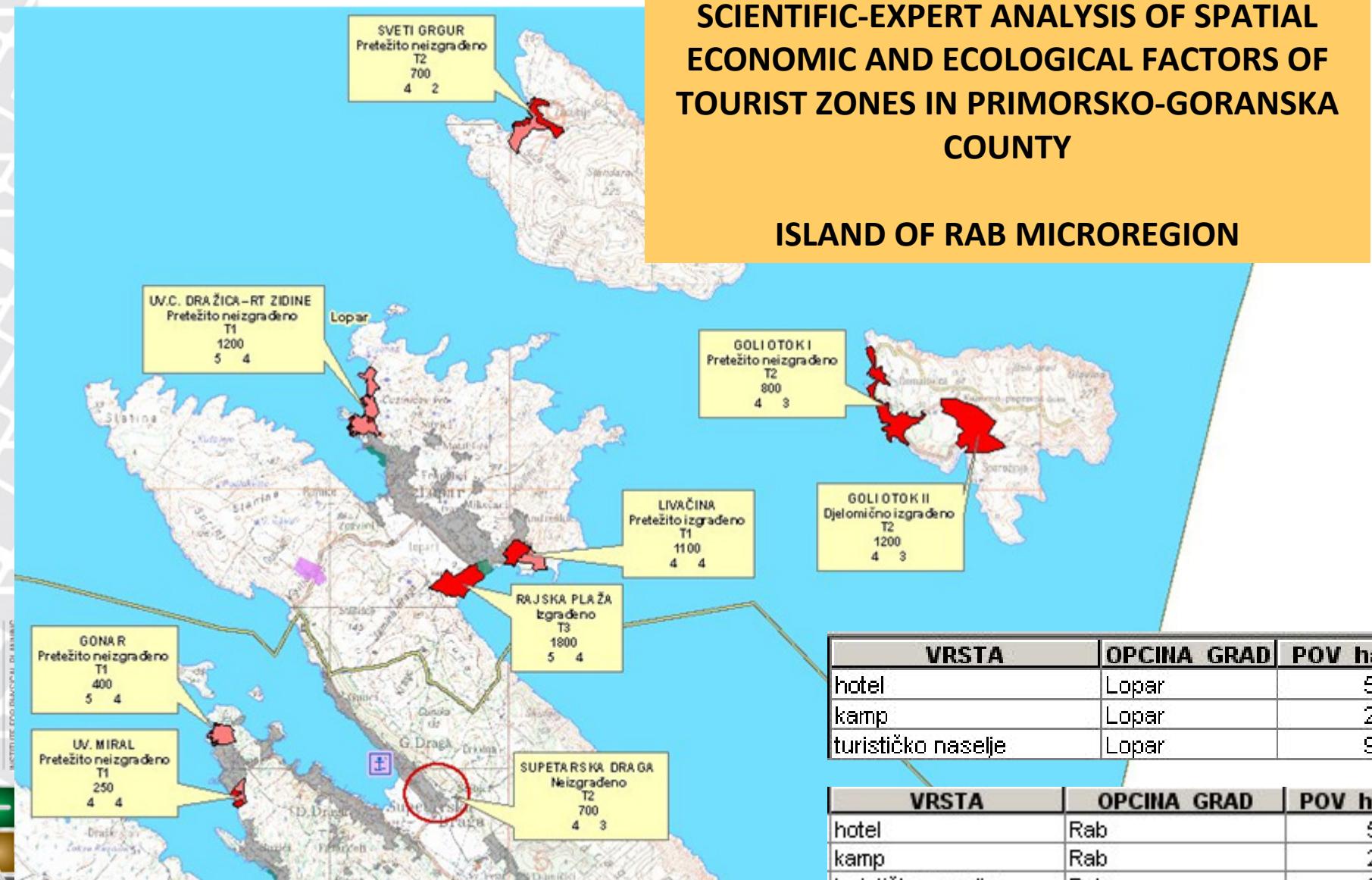
*Production of Current Status of County's  
Space Reports,  
State of the Environment Reports  
- spatial analyses*



*Provision of information  
to the public  
- searches, queries*



# APPLICATION:



# Application:

*PGC Department of  
Maritime Affairs,  
Transportation and  
Communication*

## **MARITIME DOMAIN BORDER**

*DOF5 base*



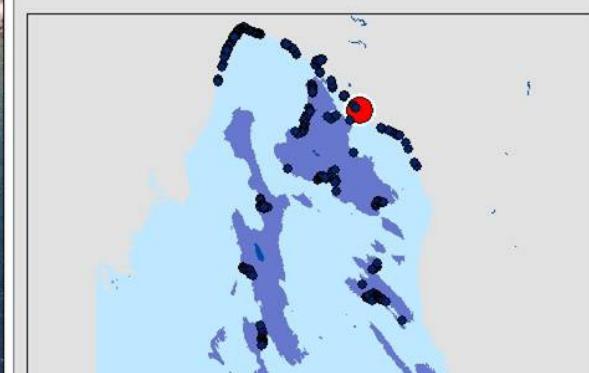
*Application: Data integration*

# **PRODUCTION OF SEA BEACHES PROFILES**

(ENVIRONMENTAL PROTECTION ACT, ORDINANCE ON SEA BATHING WATER QUALITY)



- K-testorat
- CB-caffè bar
- SS-spasilačka služba
- SK-sport na kopnu
- SV-sport na vodi
- DI-dječje igralište
- K-kabina
- T-tuš
- KL-klupa
- L/S-ležaljke suncobrani
- TG-telefonska govornica
- P-parkiralište
- mjerna točka
- dotok
- privet
- srpska stanica
- ispust



# Application: GEOPORTAL

[www.zavod.pgz.hr](http://www.zavod.pgz.hr)

Primorsko goranska županija - Windows Internet Explorer  
http://www.gis.pgz.hr/gis/default.aspx

File Edit View Favorites Tools Help

Favorites Primorsko goranska županija

AVG explore with YAHOO! SEARCH Search Page Status News [30]

INFORMACIJSKI SUSTAV PROSTORNOG UREĐENJA  
**PRIMORSKO-GORANSKE ŽUPANIJE**  
WEB-GIS PREGLEDNIK

Javna ustanova Zavod za prostorno uređenje  
Upravni odjel za pomorstvo, promet i veze  
Upravni odjel za upravljanje imovinom i opće poslove  
Popis GIS slojeva i mjerilo prikaza  
Izvor baze podataka prostornih planova

Općina/grad: Omišalj Mjerilo: <-Odabir->

Tematske grupe podataka

- JU Zavod za prostorno uređenje
  - Administrativni ustroj
    - Administrativni centri
    - Pregled izrade prostorno planske dokumentacije
  - Planirana namjena površina
    - Građevinska područja
    - Poljoprivredno tlo
  - Zaštita prostora
- Upravni odjel za pomorstvo, promet i veze
  - Vanlučka područja
    - Vanlučka područja
    - Lučka područja
    - Koncesije
- Upravni odjel za upravljanje imovinom
  - Škole
    - Matične osnovne škole
  - Domovi

- Pretraživač naselja
- Pregledna karta

Topografska karta Snimak iz zraka Bez podloge

Rezultati identifikacije

- Njivice
- Građevinska područja
  - T2-1

Oznaka namjene: T2-1  
Primarna namjena: izvan naselja  
Sekundarna namjena: gospodarska namjena  
Detaljna namjena: ugostiteljsko-turistička  
Izgrađenost: izgrađeno  
Općina/grad: Omišalj  
Opis: turističko naselje  
Naselje: Njivice  
Naziv: Njivice  
Značaj:

Izmjera: Luka Šepen - Autokamp Njivice  
Autokamp Njivice i maliste  
Obalni pojas Njivice  
Njivice - Ispod crkve

0 0.2 0.4 0.6 0.8 1km Mjerilo 1 : 24.919

Done Internet 100% 23:32

Start Microsoft PowerPoint... Javna ustanova Zavod... Primorsko goranska županija IrfanView HR 23:32

# COLLABORATION WITH STATE GEODETIC ADMINISTRATION

- ✓ 2003 – Agreement on Co-financing the Production of Topographic Maps in Scale 1:25000 with 50% of total amount
- ✓ 2005 – Delivery of data on Protected Coastal Area
- ✓ 2006 – Contract on Financing the Production of Digital Orthophoto Maps in Scale 1:5000 (DOF5) and Production of Digital Orthophoto Maps in Scale 1:2000 for Part of Protected Coastal Area (DOF2)
- ✓ 2007 – Contract on Delivery of Croatian Base Map in Scale 1:5000
- ✓ 2010 – Agreement on Cofinancing the Production and Updating of Official Spatial Base Networks for State Survey and Real Estate Cadastre for the period 2010 – 2013

# Project: INTEGRATION OF ACTS AND DOCUMENTS ON PHYSICAL PLANNING

GISDATA portal

SUSTAV HERA - PREDMETI I KĆ

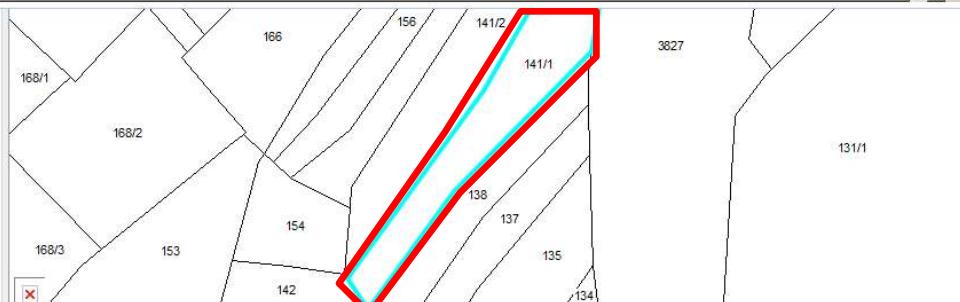
Početna stranica > Katastarske čestice

Drag a column header here to group by that column

MBR_KO	KO	cestica	Nova Izmjera	GIS
324469	BAKAR	147/3	<input checked="" type="checkbox"/>	
324604	KOSTRENA-BARBARA	141/1	<input type="checkbox"/>	
324604	KOSTRENA-BARBARA	154	<input type="checkbox"/>	
324604	KOSTRENA-BARBARA	1770/2	<input type="checkbox"/>	

Uporabna dozvola, Odbijen zahtjev  
Rješenje o uvjetima građenja, Usvojen  
Rješenje o uvjetima građenja, Odbijen  
Ostalo, Odbijen zahtjev  
Ostalo, Usvojen zahtjev

Pregled izrade prostorno planske dokumentacije  
 KATASTAR  
 PPUO  
 PPZ  
 Podloge  
 DOF5  
 HOK5



PREGLEDNA KARTA



5463621.408, 5016708.219

REZULTATI

Obrisiti sve Odaberite sve Ukloniti sve iz odabira

KĆ

ZAPIS #	RADNJE	OBJECTID_12	OBJECTID	KC_BROJ	KO	OG	NAPOMENA	KO_MBR	NOVAIZMJERA	SHAPE_LENGTH	AREA
1		12841	28858	141/1	Kostrena-Barbara	Kostrena		324604	0	129.270971984354	275.15398

Local intranet 100%

# CONCLUSION

- ✓ *The Institute fully supports the establishment of NSDI at local, regional as well as national level.*
- ✓ *Unfortunately, the establishment of the Information System of Physical Planning, as an NSDI subsystem, is not being carried out as a systematic project.*
- ✓ *Possible reason for that is insufficient human resources and unsystematic planning. In that respect, Primorsko-Goranska County is an exception both by the number of staff and resources invested in the system development.*
- ✓ *The Institute fully supports the State Geodetic Administration in the development of NSDI, alignment with the EU INSPIRE Directive, the basic infrastructure for the development of Information System of Physical Planning in RoC.*