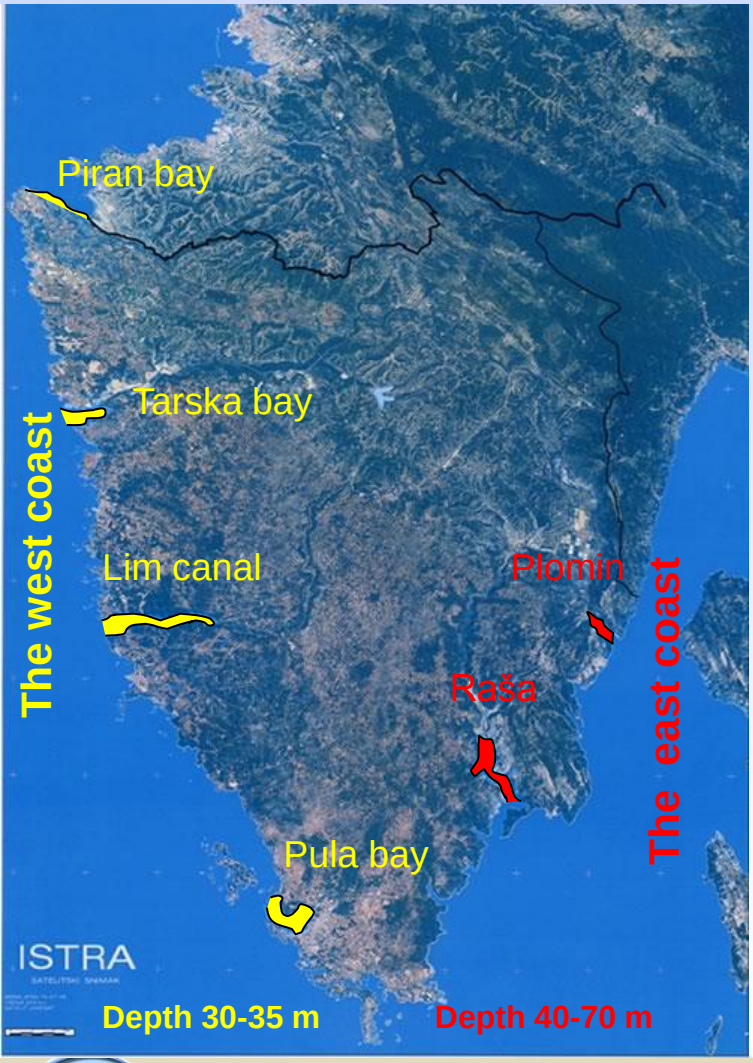
Marine mapping habitat type in the Istria Region

Future allocation for marine NATURA 2000 sites

The Istrian Coast



-The west coast - shallow, rocky, very intented (islands and islets), direction NNW-SSE, deep bays (the part of Piran and Tarska bay, than the Lim canal and the part of Pula on the south)

-The east coast - steep, less intented, direction SSW-NNE, deep bays are Raša and Plomin bays

National park Brijuni

The total length of the Istrian coast with islands and islets is **524 km**

The majority of the Istrian coast is on the karst and the limestone grounds

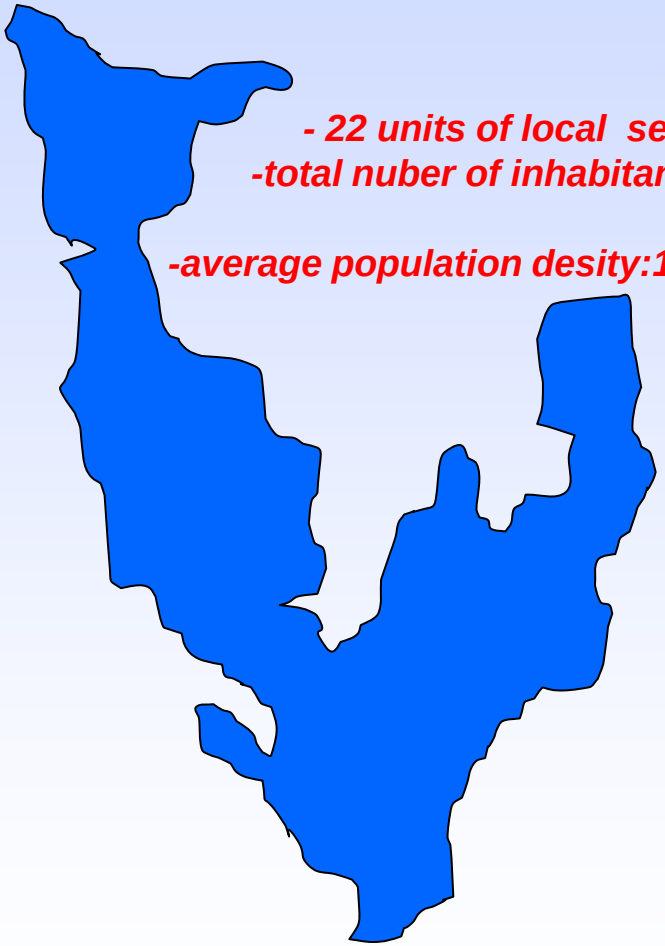
Coastal zone of the Istrian Region

Istrian Region

-The Istrian Region consists of **41 units of local self-government** (10 towns and 31 municipalities)

-**Total number of inhabitants: 206.344** or 4,65 % of the population of the Republic of Croatia

-Average population density: 73 inhabitants per square kilometer



- 22 units of local self-government
-total nuber of inhabitants: 162 765 (78,88%)
-average population desity:137 inh./km2

Legal Framework for the Istrian Coastal zone

- **Environmental Protection Act (OG, No. 110/07)**

"***Environment*** is the natural surrounding of organisms and their communities including man, which enables their existence and their further development;the air, water, soil, lithosphere, energy and material assets and cultural heritage as part of man-made surroundings, in their diversity and totality of mutual interaction

"***Marine environment*** is the living space of organisms and their communities, defined by distinctive physical, chemical an biological features which includes:open sea zones, estuaries and coastal marine zones including internal sea waters, territorial sea, sea bottom and seabed of those marine zones

"***Integrated coastal zone management (ICZM)*** is the dynamic process of sustainable management and use of coastal zones, simultaneusly taking into account the frailty of coastal ecosystems and the landscape, the diversity of activities and use, their interaction, the maritime orientation of certain activities and uses and their impact on marine and terrestrial components

- **Physical Planning and Building Act (OG No. 76/07, 38/09, 55/11, 90/11) -Protected coastal area (PCA) instruments** has been proclaimed including the coastal belt of 1000 meters on mainland and all islands, and a 300 m marine belt

- **Physical Plan Region of Istria** (Istrian Region "Official Paper" No. 16/11-consolidated text, article 149)-…obligation is determined for making

the *Plan of integrated coastal zone management*

Protection of marine and coastal habitats

- One of the most importante mechanisms for the protection of marine and coastal habitats is the designation of the NATURA 2000 ecological network
- Pursuant to the Habitat Directive, we are obliged to evaluate such habitats in the area of the sea under national jurisdiction and to ensure the inclusion of areas important for the threatened habitat types listed in Annex I of the Directive into the NATURA 2000 ecological network

Marine habitats NATURA 2000 in Republic of Croatia- adequately habitats according to National classification of habitat of Republic of Croatia (prepare: Tatjana Bakran-Petricioli, February 2011.)

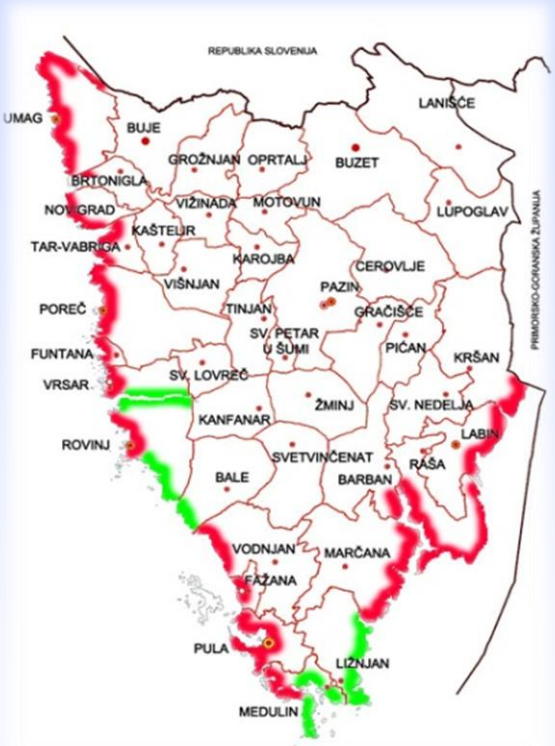
- The Ordinance on habitat types, habitat map, threatened and rare habitat types and habitat type conservation measures was adopted in January 2006 (OG 07/06). It lists all the habitat types protected under the Habitat Directive, Resolution no.4 (1996) of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), and those threatened at the national level
- Croatia has developed National Habitat Classification (NHC) in order to emphasize the habitat diversity of its territory and certain specific characteristics, such as habitats related to marine environments, underground and karst area
- February 2011, NHC are converted into code of marine habitats NATURA 2000

Threatened and rare habitat types important for the EU NATURA 2000

Natura 2000 code	NATURA 2000 habitat type	National Habitat Types Classification (NHC)
1110 	Sandbanks which are slightly covered by sea water all the time	G.3.2.1. Biocenosis of fine surface sands; G.3.2.2. Biocenosis of fine monotonous sands; G.3.3. Infralittoral large sands with more or less mud;G.3.4. Infralittoral rocks and gravels; G.4.2.2. Biocenosis of coastal detritus seabeds
*1120 (priority habitat type) 	Posidonia beds (*Posidonion oceanicae*)	G.3.5. Posidonia beds
1130 	Estuaries	F.1.2. Supralittoral muds; F.2.2. Supralittoral sands;G.1.1.1.2. Pelagial of estuaries; K.1. Estuaries
1140 	Mudflats and sandflats not covered by sea water at low tide	F.1.2. Supralittoral muds; F.2.2. Supralittoral sands; F.3.2. Supralittoral gravels and rocks; G.2.1. Mediolittoral muddy muds and sands; G.2.2. Mediolittoral sands

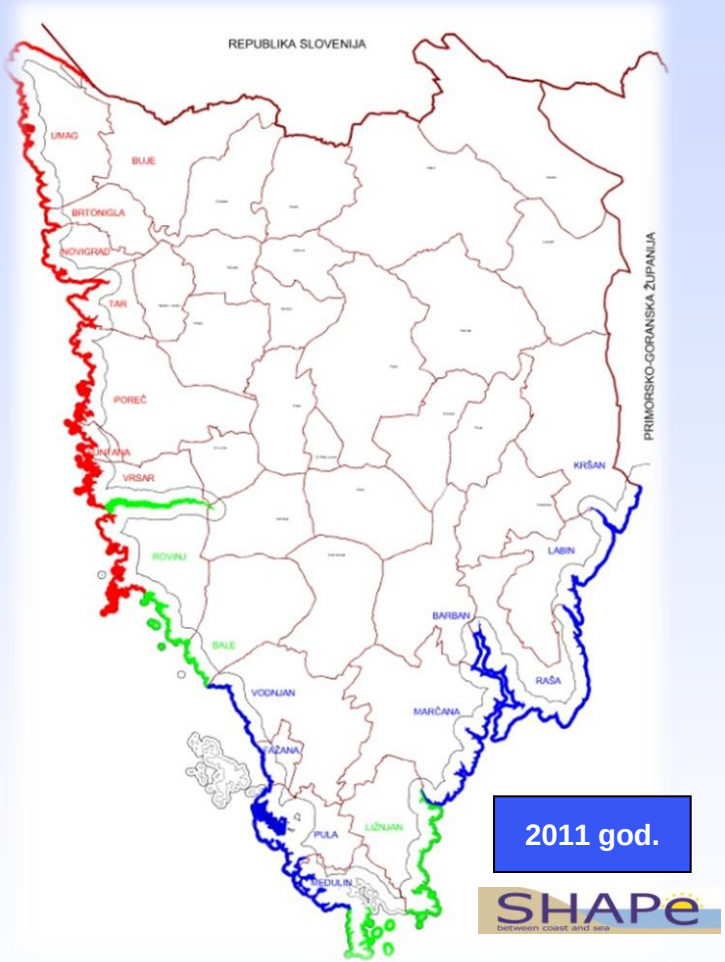
Natura 2000 code	NATURA 2000 habitat type	National Habitat Types Classification (NHC)
 *1150 (priority habitat type)	Coastal lagoons	G.2.4.4. Communities of mediolittoral karst sea lakes; G.3.1. Infralittoral sandy muds, sands grovels and rocks in euryhaline and eurithermal environment; G.3.7. Infralittoral of karst sea lakes; G.4.4. Circalittoral of karst sea lakes; K.2. Coastal lagoons
 1160	Large shallow inlets and bays	F.1.2. Supralittoral muds; G.2.4.4. Communities of mediolittoral karst sea lakes; G.3.2.3. Biocenosis of muddy sands of sheltered coasts; G.3.7. Infralittoral of karst sea lakes; G.4.4. Circalittoral of karst sea lakes; K.3. Large shallow inlets and bays
 1170	Reefs	F.4.2. Supralittoral rocks; G.2.4.1. Biocenosis of mediolittoral upper rocks; G.2.4.2. Biocenosis of mediolittoral lower rocks; G.3.6. Infralittoral hard seabeds and rocks; G.4.3.1.Coralligenous biocenosis; G.4.3.3. Biocenosis of deep sea rock (rock at the edge of continental shelf); G.4.3.4. Biocenosis of springs of underground type; G.5.3.1. Biocenosis of deep corals
 8330	Submerged or partially submerged sea caves	G.2.4.3. Biocenosis of mediolittoral caves; G.4.3.2. Biocenosis of semi-dark caves (it also appears as an enclave in infralittoral); G.5.3.2. Biocenosis of caves and passages in complete darkness (it also appears as an enclave in upper stages)

Marine and coastal habitats in the Istria Region



1979. year

2002-2010. year



2011 god.

Marine mapping habitat types in Istria- what we done?

- Restricted tender procedure (May-August 2011.)
- 2 workshops:

Marine mapping habitat types; Team building

Pula, 30/31 August 2011.

Banjole, 02/03. September 2011.

06.09.2011.- 17. 11.2011. - *Mapping marine habitats*

(9 cities/municipalities, 55 working days, 293 diving fields, 2 dive per day, 3 diving pairs)

-Skippers (2)

-Biologist SCUBA diver (6)

-Diving instructors (12)

RESULTS

- 174 km (40 %) of Istrian coastal zone have been mapped according to Habitat Directive (scale 1:10 000), up to 40 m depth or to marine belt (300 m)
- 6 threatened and rare habitat types important for the EU Natura 2000
- 11 habitat types listed in Resolution no.4 of Bern Convention as habitat types requiring specific conservation measures
- 24 national habitat types

- over than 2 000 underwater photos has been shooting
- more than 10 hours underwater digital recording

total diving time = 13 191 minutes (219,85 hours or 9,16 days)

2. Press conferences (Pula 18. 10. 2011. and 20. 12. 2011.)

U tijeku kartiranje podmorskih staništa

ŽUPANIJSKI ZAVOD ZA PROSTORNO UREĐENJE ZAPOČEO REALIZACIJU PROJEKTA "SHAPE"

Pola 15

È quanto emerge dallo studio del litorale nel quadro del progetto SHAPE

Istria meridionale: acque cristalline fondali intatti e tanta gorgonia rossa

10 Pola

Presentata la mappatura (SHAPE) delle comunità viventi marine in Adriatico

Il mare dell'Istria custode di numerose specie protette

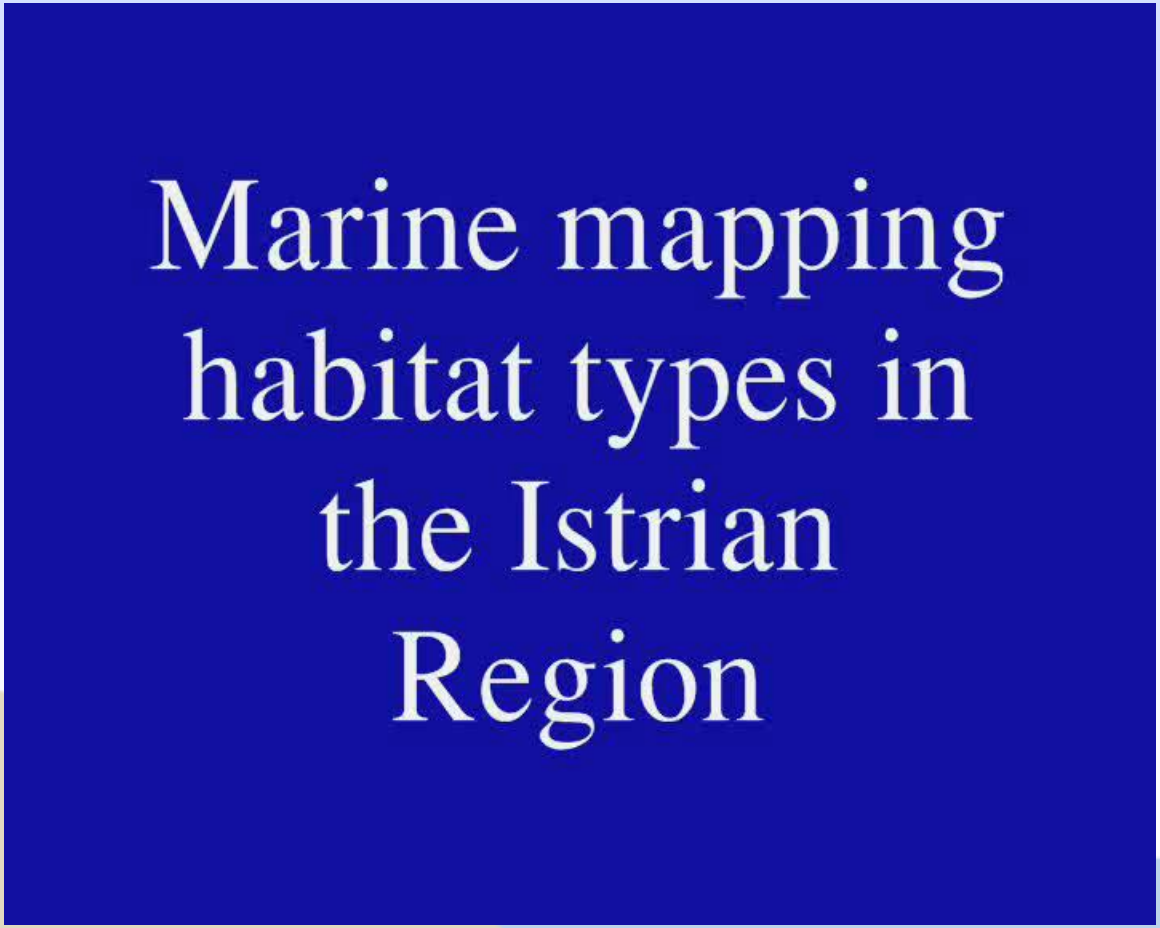
BREVI

Fiati e solisti per il tradizionale concerto di Natale

Let's grow up together Adriatic IPA Cross Border Cooperation 2007-2013

MEDITERRE 2012 – Bari, 1st February - SHAPE Project International Conference
Latinka Janjanin, Institut for Physical Planning Region of Istria – Marine mapping habitat type in Istria Region-future allocation for marine NATURA 2000 sites

…picture speaks a thousand words….



Working Plan 2012.

- **Post cards (Istria Tourist Board)**
- **Educational DVD with marine habitats- Cro,It,En (primary and secondary school)**
- **"Traveling" underwater exhibition across the Istria county**
- **Draw the map in GIS (marine habitats Region of Istria) – marine NATURA 2000**


Thank you for your attention!