

An aerial photograph of the Kornati National Park in Croatia, showing numerous small, rocky islands with sparse vegetation scattered across a deep blue sea. The islands have a rugged, layered appearance. A few small sailboats are visible in the water in the lower left.

MPA MANAGEMENT KORNATI NATIONAL PARK

Martina Markov, PhD

Kornati Archipelago – the densest archipelago in Mediterranean
(147 land units; 320 km²)

- Kornati National Park - established in 1980.
- 216 km² = 89 islands, isles and reefs (Land 49,67km² / **Sea 167,11km²**)
- Length of coast 238 km
- Highest point 237 m
- Lowest point 125 m
- Number of “inhabited” coves 24
- Number of inhabitants 25
- **Privately owned 99,99 % (620)**

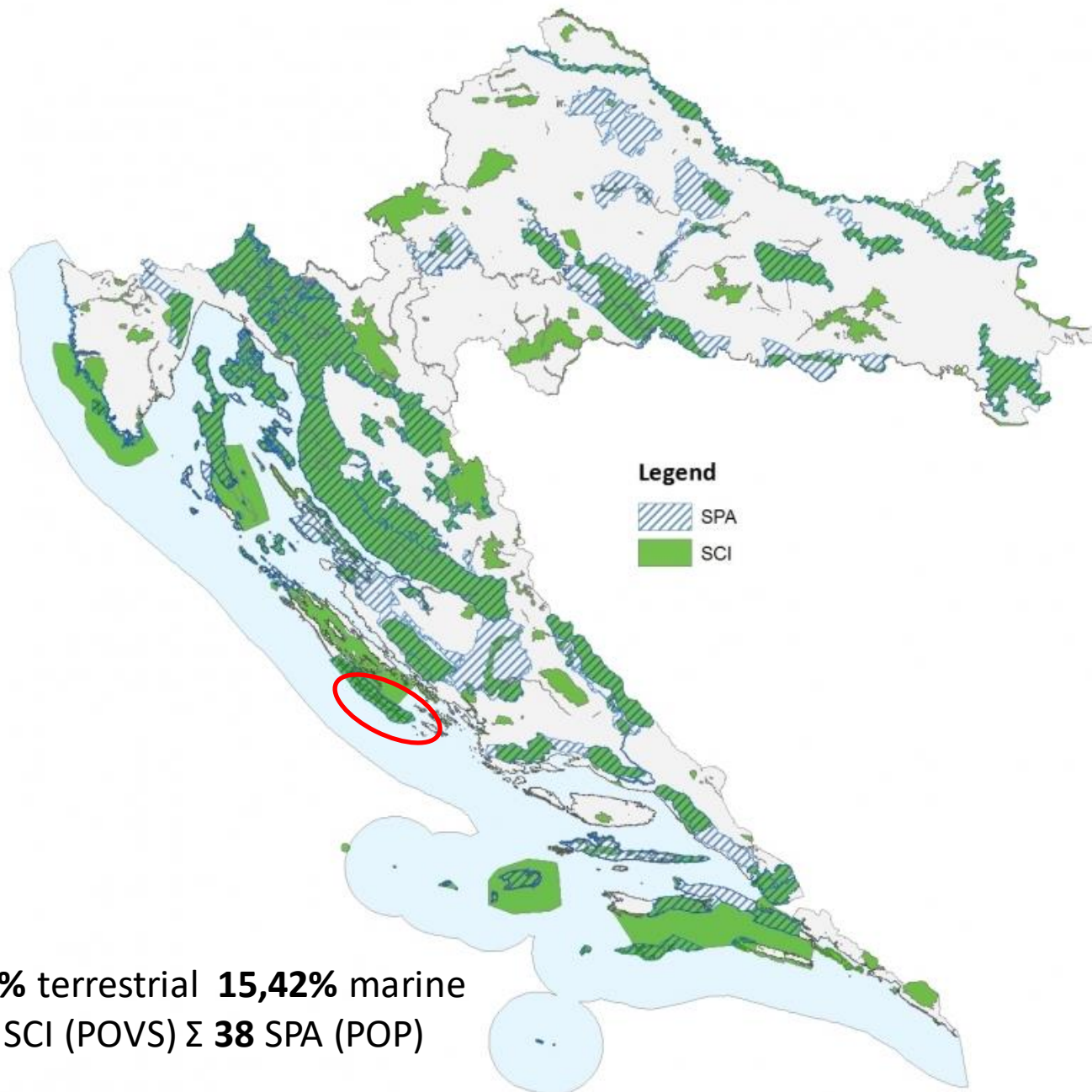




KORNATI

Nacionalni park
National Park

Facts and Figures



Legend



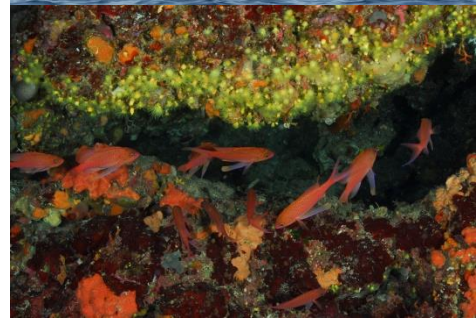
36,73% terrestrial 15,42% marine
Σ 743 SCI (POVS) Σ 38 SPA (POP)



PARKOVI Parks
of Croatia
HRVATSKE

Why national park?

- exceptional geographic & geomorphological features („crowns”)
- anthropogenic terrestrial vegetation (*rocky pastures*)
- rich marine biodiversity and oceanographic specificities
 - + cultural and traditional heritage



- 21 PERMANENT + up to 20 temporary (seasonal) staffing
- **Annual budget = cca 1.000.000 €**
- *National budget (50%)*
- *Fees collected from Kornati NP users (entrance fees, SCUBA diving permits, ...)*
- *Other sources (donations, funds, ...)*



"High" terrestrial biodiversity

- Important terrestrial habitats: coastal limestone cliff vegetation, tree spurge stands, and the forest community of myrtle and holm oak (*Myrto-Quercetum ilicis*)
- **more than 650 plant species** (so far) important plant species: Dubrovnik Knapweed (*Centaurea ragusina*), Adriatic Iris (*Iris adriatica*), Illyrian Iris (*Iris illyrica*), orchids (Orchidaceae)...
- Important bird species: Common Shag (*Phalacrocorax aristotelis desmaresti*), Alpine Swift (*Apus melba*), Common Swift (*Apus apus*), and Pallid Swift (*Apus pallidus*), Peregrine Falcon (*Falco peregrinus*), Eagle Owl (*Bubo bubo*)
- butterflies – 18 species, beetles – 101 species, ants – 35 species
- 1 amphibian species, 7 reptile species and 3 mammal species

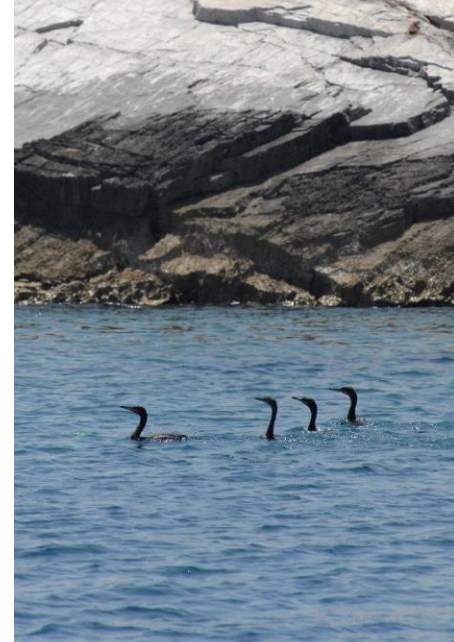


HR4000001 Kornati National Park (SCI)

English name of the species / English name of the habitat	Scientific name of the species / Habitat type code
Pseudo-steppe with grasses and annuals of the Thero-Brachypodietea	6220*
Thermo-Mediterranean (steno-Mediter.) scrub formations with <i>Euphorbia dendroides</i>	5330
Eastern sub-Mediterranean dry grasslands (<i>Scorzonera villosa</i>)	62A0
Vegetated sea cliffs of the Mediterranean coasts with endemic <i>Limonium</i> spp.	1240
Olea and Ceratonia forests (forests of wild olive and carob trees)	9320

HR1000035 Kornati National Park and Telašćica Nature Park (SPA)

Scientific name	English name	Status of the species
<i>Alectoris graeca</i>	rock partridge	breeding
<i>Anthus campestris</i>	tawny pipit	breeding
<i>Bubo bubo</i>	Eurasian eagle-owl	breeding
<i>Caprimulgus europaeus</i>	European nightjar	breeding
<i>Circaetus gallicus</i>	short-toed snake eagle	breeding
<i>Circus cyaneus</i>	hen harrier	wintering
<i>Falco columbarius</i>	merlin	wintering
<i>Falco peregrinus</i>	peregrine falcon	breeding
<i>Gavia arctica</i>	black-throated loon	wintering
<i>Lanius collurio</i>	red-backed shrike	breeding
<i>Lanius minor</i>	lesser grey shrike	breeding
<i>Phalacrocorax aristotelis desmarestii</i>	European shag	breeding



High marine biodiversity

- **Neptune Grass (*Posidonia oceanica*)** covering the coastal seabed of the Kornati down to the depth of 25 – 30 m (assumption 40 – 50% coverage)
- **coralline habitat (reefs)** - formed by red algae
- **≥ 1 455 species (so far) assumption up to 3 000**
- **Bottlenose Dolphin (*Tursiops truncatus*)** - 150 individuals
- **Loggerhead Turtle (*Caretta caretta*)** - a frequent visitor

HR4000001 Kornati National Park (SCI)

English name of the species / English name of the habitat	Scientific name of the species / Habitat type code
Submerged or partially submerged sea caves	8330
Caves not open to the public	8310
Posidonia beds (<i>Posidonia oceanica</i>)	1120*
Reefs	1170
Large shallow inlets and bays	1160

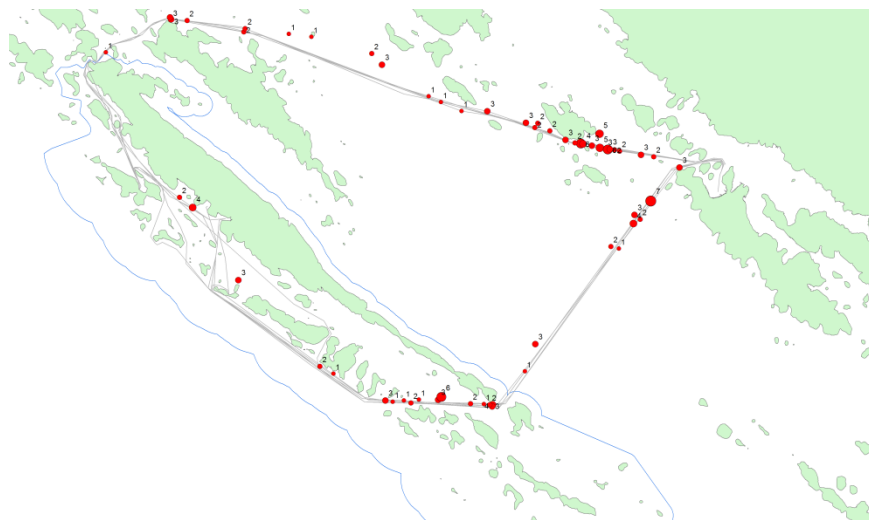
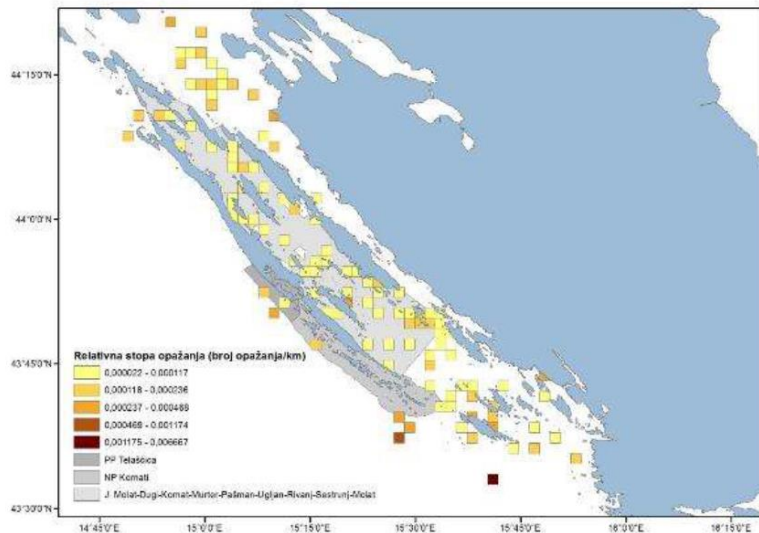
HR3000419 J. Molat - Kornat - Murter - Pasman - Ugljan - Rivanj - Sestrunj – Molat (SCI)

English name of the species / English name of the habitat	Scientific name of the species / Habitat type code
Common bottlenose dolphin	<i>Tursiops truncatus</i>



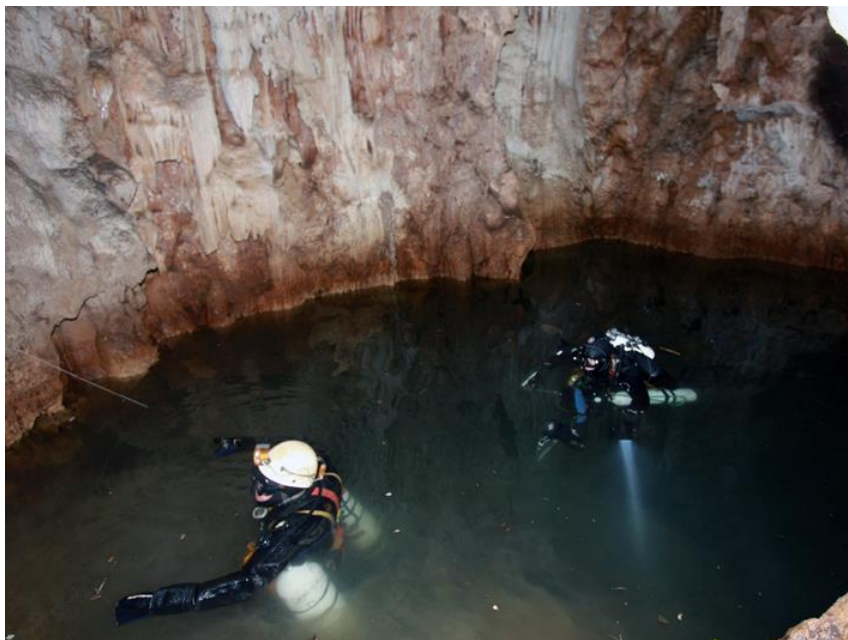
Natural Heritage Marine species and habitats

Bottle-nosed dolphin (*Tursiops truncatus*) 2010 +; ≥ 150 specimen

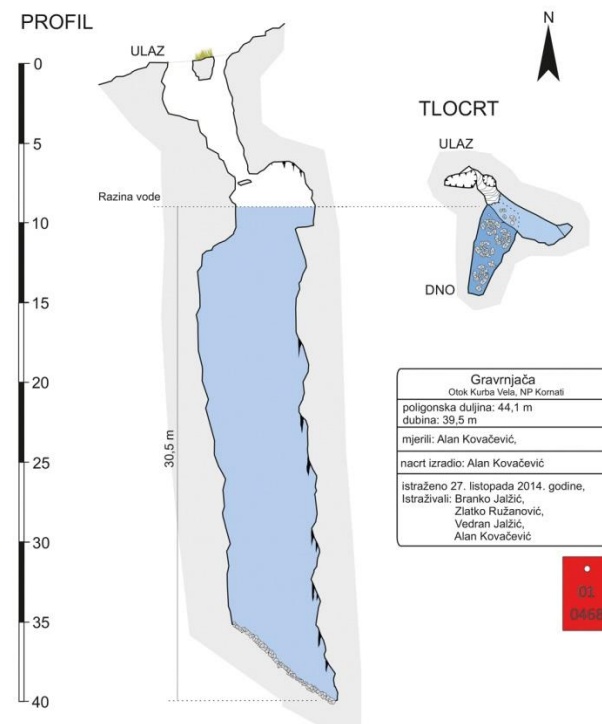


Submerged or partially submerged sea caves 8330

- 2003 +: 10 caves; mapping and profiling, water chemistry, T, species,...



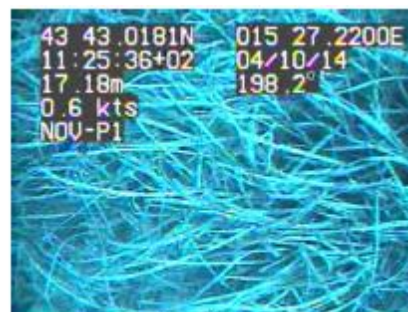
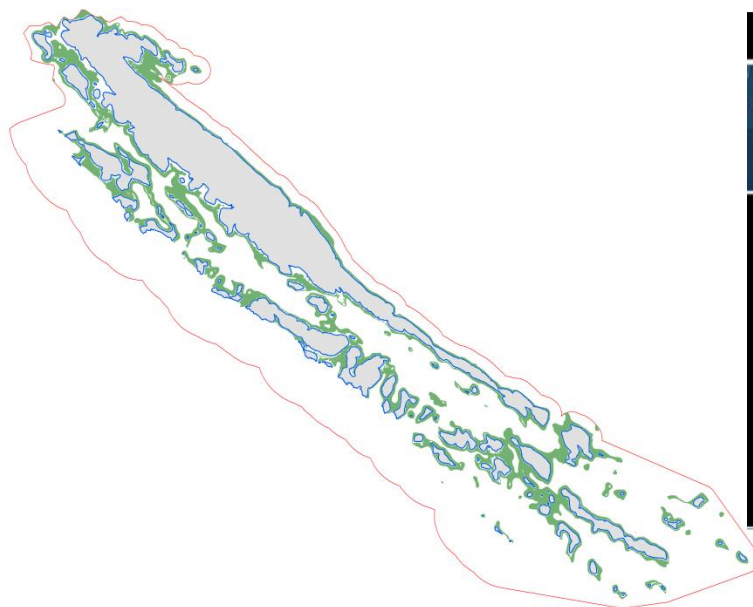
Gravrnjača
NP Kornati



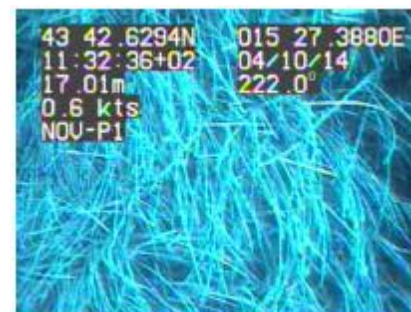
Natural Heritage Marine species and habitats

Posidonia beds (*Posidonia oceanica*) 1120*

- 2009 +; cca 40-50% of infralittoral; mapping and monitoring



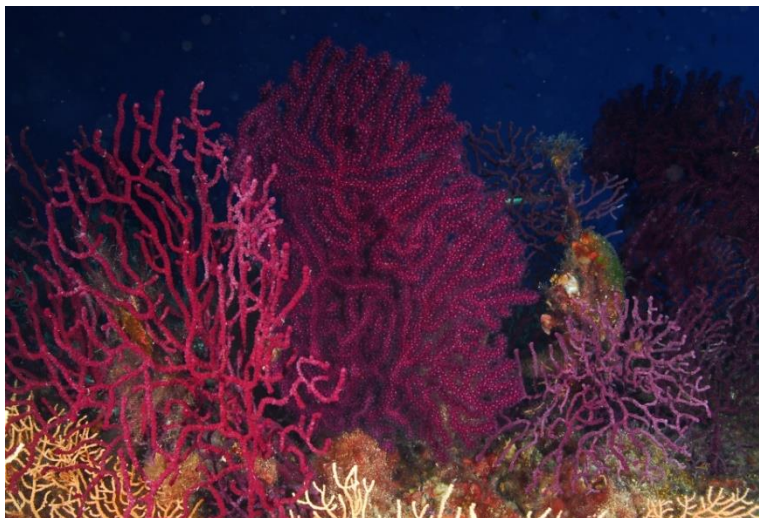
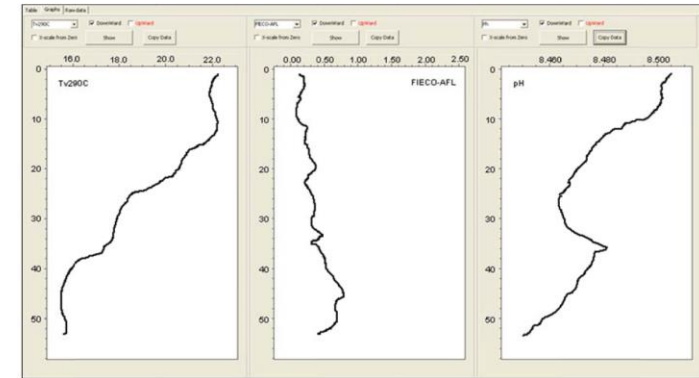
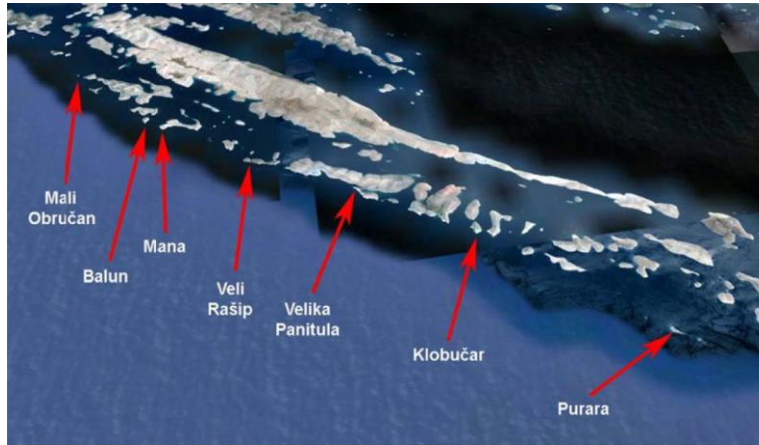
Postaja 307



Postaja 308

Reefs 1170

- 2009 +: mapping and monitoring - water physics and chemistry, species,...



***Phalacrocorax aristotelis desmarestii* European shag**

- Monitoring 2000 +
- 150 pairs – breeding population



Eastern sub-Mediterranean dry grasslands (*Scorzoneretalia villosae*) 62A0

- Data (mapping) still missing!!!!
- Invasive species – Aleppo pine (*Pinus halepensis*) and Tree of heaven (*Ailanthus altissima*) due to forbidding controlled fire policy



Long lasting coexistence of man and nature

Traditional activities:

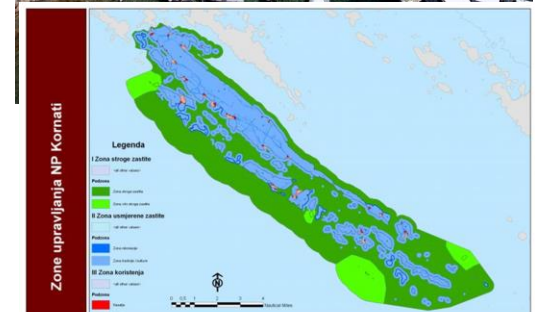
- Sheep-herding
- Olive -growing
- Vineyards (*in the past*)
- Bee-keeping
- *Traditional fishing*
(forbidden from January 1 2016)



Management plan of Kornati National Park (2014 – 2023)

Goals in long-term sustainable management:

- **Preservation of natural and cultural value**
– protect and improve biological and landscape diversity, cultural heritage and traditional values
(NATURA2000 species and habitats as priority)
- **Visitor education and recreation** – promote and develop possibilities to understand and enjoy the specific qualities of the Kornati National Park
- **Strengthening the local community** – strengthen the interest of the local population in the sustainable usage of natural and cultural resources of the Kornati National Park, with the aim of better social and economical development



Management plan of NATURA2000 sites?

Still in process of preparation – national level!

Phase: Design of guidelines

Management Plan(s) Expected

2019!





Forum for the development of sustainable tourism set up („**Stakeholder’s Forum**”)

Sustainable Tourism Development Strategy and Action Plan for the Broader Kornati National Park Area (2015 – 2019)

- 40 activities
- 4.000.000 €
- 40 agreements signed



Main Obstacles and Challenges

- **PRIVATE PROPERTY** (and national governance!!!!)
- **LACK OF COOPERATION WITH OTHER STAKEHOLDERS** (especially land-owners – illegal activities – *fishing*, abandoning traditional activities – controlled fires forbidden)
- No political recognition of "smart governance" (*European Charter for Sustainable Tourism*)
- **HIGH MANAGEMENT COST** (not much left for priority activities)
- **INADEQUATE LEGISLATION** (old physical plan, lack of authority of park rangers, ...)
- **LACK OF INFRASTRUCTURE** (still no visitor center(s), buoys and pontoons,...)
- **ENVIRONMENTAL ISSUES** (invasive species – *Caulerpa racemosa*, *Pinus halepensis*, damages on the sea bottom caused by anchoring, flooding garbage, marine litter, no sewage systems...)



EU Natura 2000 Integration Project – NIP

Loan Agreement with the World Bank

- *Visitor's center in Kornati NP – reconstruction and conversion of the existing building into the Visitor Center "Vrulje" in NP Kornati*
- *Visitor's center in Betina (Murter Island) – reconstruction and conversion of the existing building into the Visitor Center Kornati NP and Vrana Lake Nature Park*

IPA 2011

Supporting CSOs in Development of Partnerships for Sustainable Use of Protected Areas in Croatia, Including Potential NATURA 2000 Sites

1. Partnership for sustainable use of common marine resources

Status: Project partner Total budget: 116 000 €

2. Revitalising local traditional practice of sustainable use of natural resources of the island Murter and its Natural region

Status: Associated partner Total budget: 110.000 €

UNDP - Global Environment Facility (GEF), government, PAs
PARCS (2014 – 2018)

Status: Beneficiary Total budget: 22.964.116 US\$

ESI Funds

OP Competitiveness and cohesion 2014 – 2020

TO *Environmental Protection and Sustainability of Resources*

REDIVIVA project

Status: Lead Partner Total budget: 5.900.000 €

INTERREG MED

- **ACT4LITTER** Status: *Associated partner*
- **DESTIMED** Status: *Beneficiary (40.000 €)*

THANK YOU





Public Institution „Kornati National Park”

Murter – CROATIA

www.np-kornati.hr

martina.markov@np-kornati.hr

