Workshop: How to progress from TSG 3 Flagships towards EUSAIR macro-regional in the Multiannual Financial Framework period 2021-2027

PAP/RAC activities on climate change adaptation, AdriAdapt project, MSP Workspace and CAMP B&H

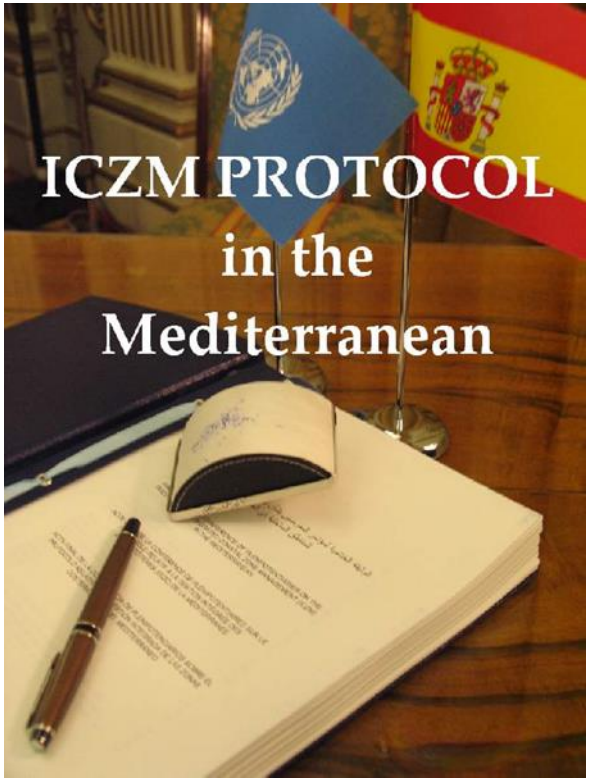
22 September 2022

Marko Prem

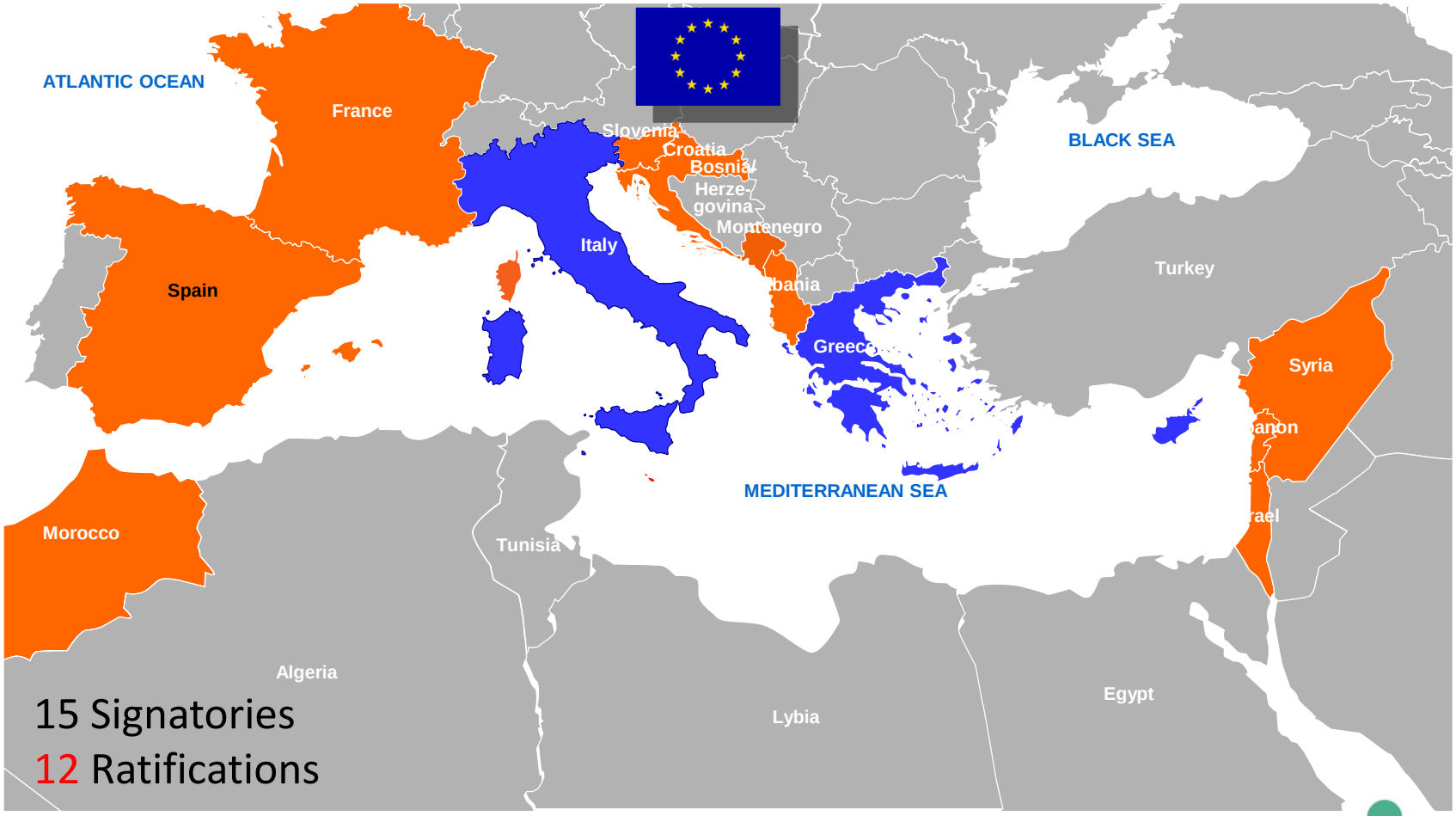
ICZM Protocol

Signed in Madrid, 21 Jan 2008

Entered into force, 22 February 2011



ICZM Protocol:
Status of ratification as of September 2022



Climate Change Adaptation

Coastal plan

Coastal Plan or ICZM Plan is a guide towards building resilience to climate change and towards sustainable development

Coastal Plan is an “indicative” plan, based on the Article 18 of the ICZM Protocol

Coastal Plan is a new generation plan, one of the few around the Mediterranean

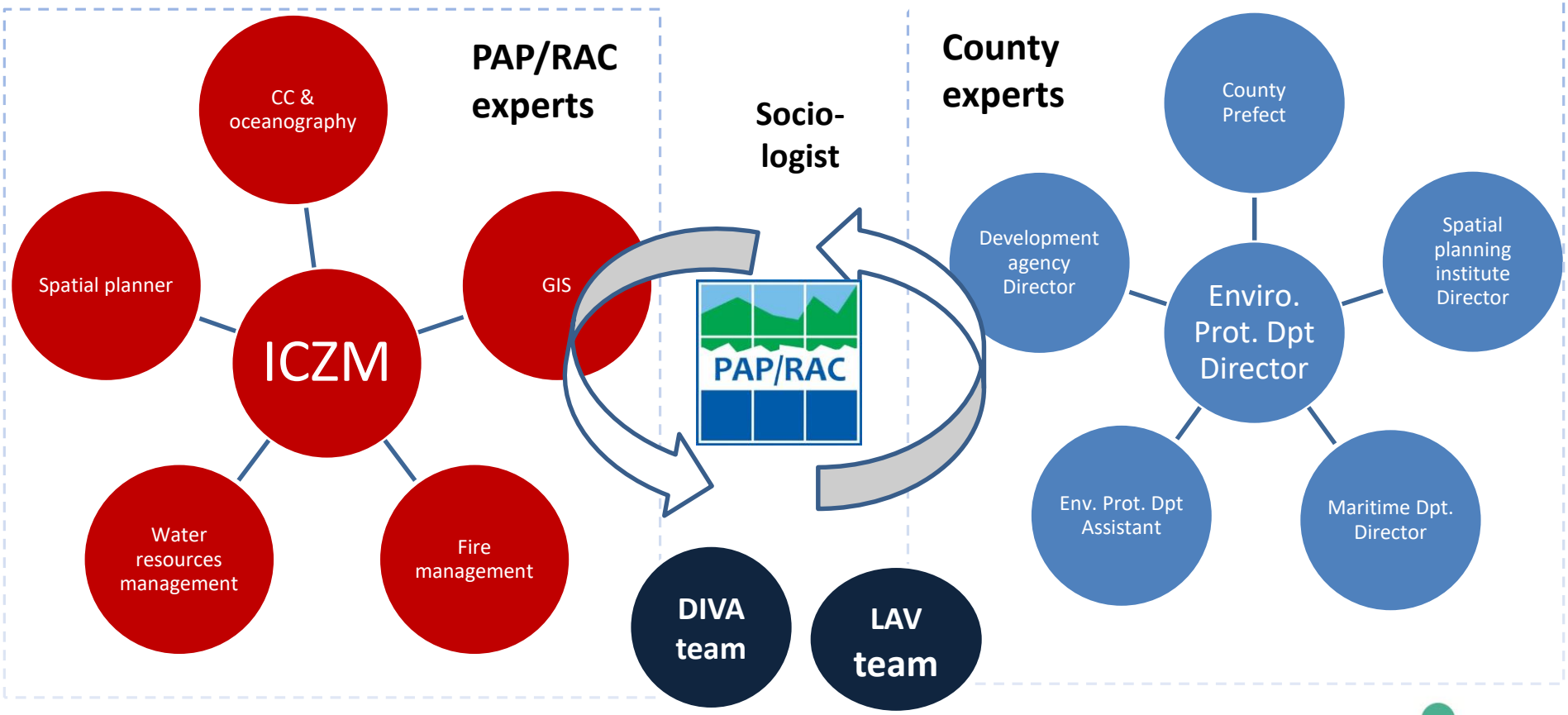
Sibenik-Knin County

Coastal plan themes

1. Space as the key resource of the coastal zone
2. Climate variability and change, the transversal issue, with effects on:
   - waters & water management,
   - infrastructure,
   - forest fires,
   - economy and society.

3. Tools – GIS

Plan Bleu


PAP/RAC experts
CC & oceanography
Spatial planner
ICZM
GIS
Water resources management
Fire management
Socio-logist
PAP/RAC
DIVA team
LAV team
County experts
County Prefect
Development agency Director
Enviro. Prot. Dpt Director
Spatial planning institute Director
Env. Prot. Dpt Assistant
Maritime Dpt. Director

Plan preparation and implementation process

INTEGRATION

ESTABLISHMENT
- Establishing Coordination Mechanisms
- Definig Territorial Scope
- Defining Governance Context
- Scoping
- Engaging Stakeholders
- Proposing a Vision
- Deciding on SEA

ANALYSIS & FUTURES
- Building the Evidence
- Identifying Futures

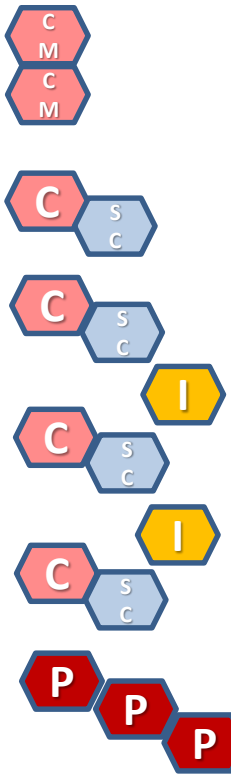
SETTING THE VISION
- Building Consensus
- Setting the Direction
- Measuring Success

DESIGNING THE FUTURE
- Formulating ICZM Strategies, Plans or Programmes
- Establishing Management Structure
- Embedding

REALISING THE VISION
- Implementating
- Acting
- Monitoring and Reviewing

FEED BACK

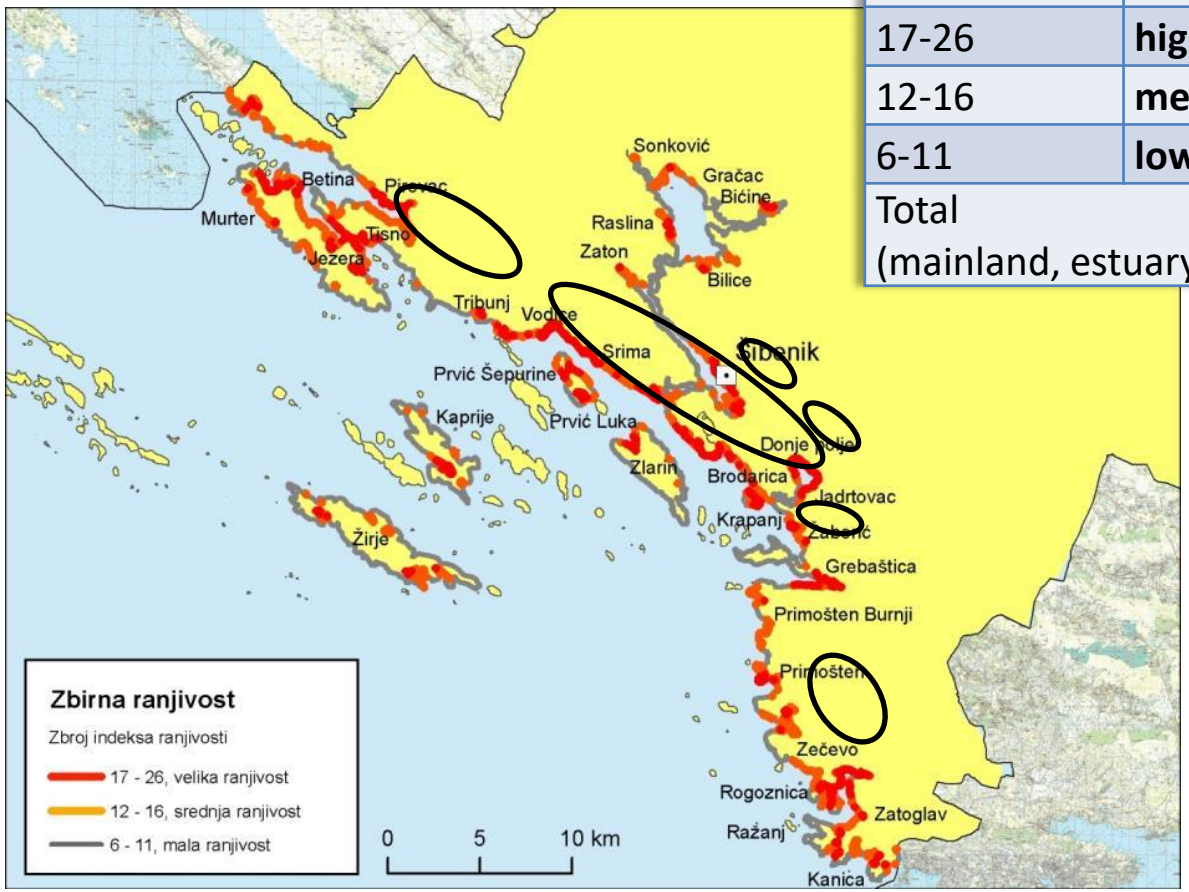
Information/education, consultation and participation



C. COMMITTEE FOR IMPLEMENTATION

Cummulative vulnerability

Sum of subindexes	Cumm. vulnerability	Length (%)
17-26	**high**	79,68 km (17 %)
12-16	**medium**	134,55 km (28 %)
6-11	**low**	264,62 km (55 %)
Total (mainland, estuary, inhabited isl.)		478,85 km



The most vulnerable zones:

1.Murter – Tisno

2.Tribunj – Brodarica with island Krapanj

3.Šibenik

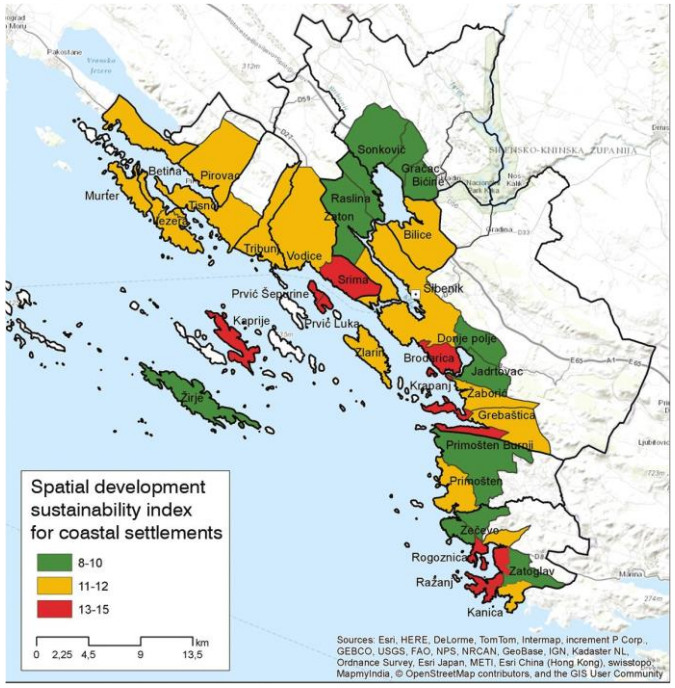
4.Morinje

5.Grebaštica

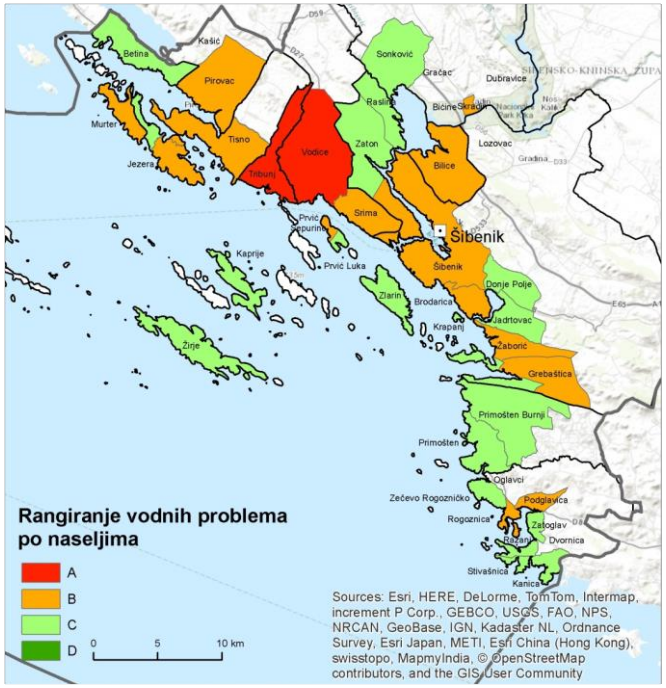
6.Zečevo - Ražanj

Sustainability ranking

SPATIAL DEVELOPMENT



WATER RESOURCES MANAGEMENT



Measures: Narrow coastal belt

I Adaptation of the existing coastal objects, waterfronts, marinas and entire coastal infrastructure, including beaches, promenades, etc. to the extreme weather events;

II Protection of hydro-dynamic features of the coastal sea, biodiversity and positive natural processes of sediment transport; and

III Integration of these considerations in planning and realisation of any coastal intervention

AdriAdapt - a resilience knowledge platform for the Adriatic

Interreg AdriAdapt project

Expert partners

cmcc Centro Euro-Mediterraneo sui Cambiamenti Climatici
arpae emilia-romagna
IUAV
DHMZ
PAP/RAC

Local partners

Šibenik - Knin County
Town of Vodice
COMUNE DI Udine
UNIONE DEI COMUNI VALLE DEL SAVIO

Communication partner

DOOR

January 2019 – June 2021

AdriAdapt - a resilience information platform for the Adriatic

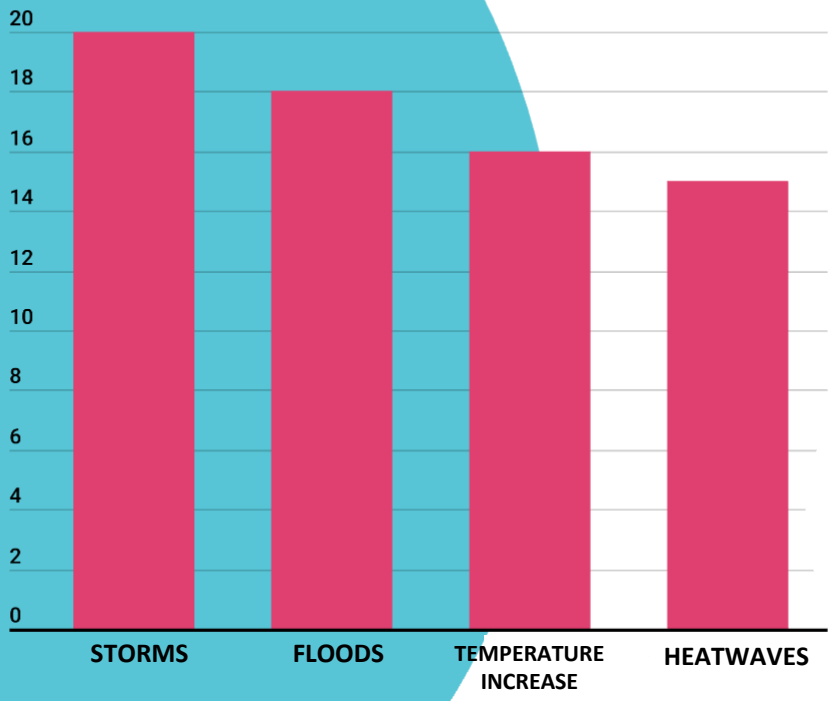
adriadapt.eu

Questionnaire for local and regional administrations on impacts of climate change

24 respondents from 20 local authorities
12 respondents from 10 local authorities

Questionnaire

Observed impacts of climate change in Adriatic cities



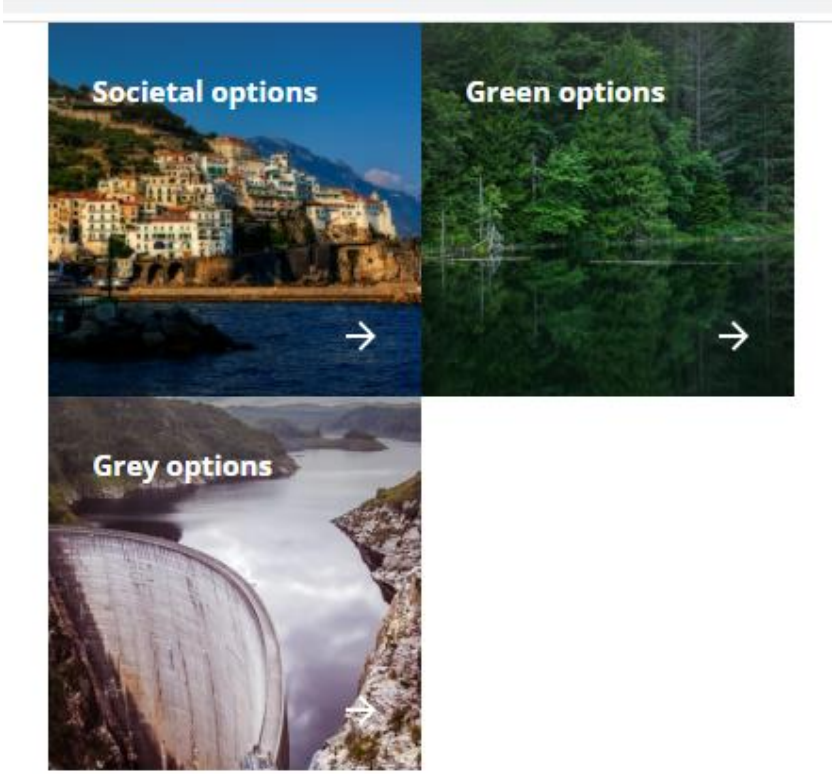
Integrated Adaptation Planning Tool

1 Starting the process	2 Assessing the vulnerability	3 Setting the vision
4 Designing the plan	5 Implementing the plan	Stakeholders engagement

Five stages of the planning process for the local adaptation plan

View All →

Adaptation options



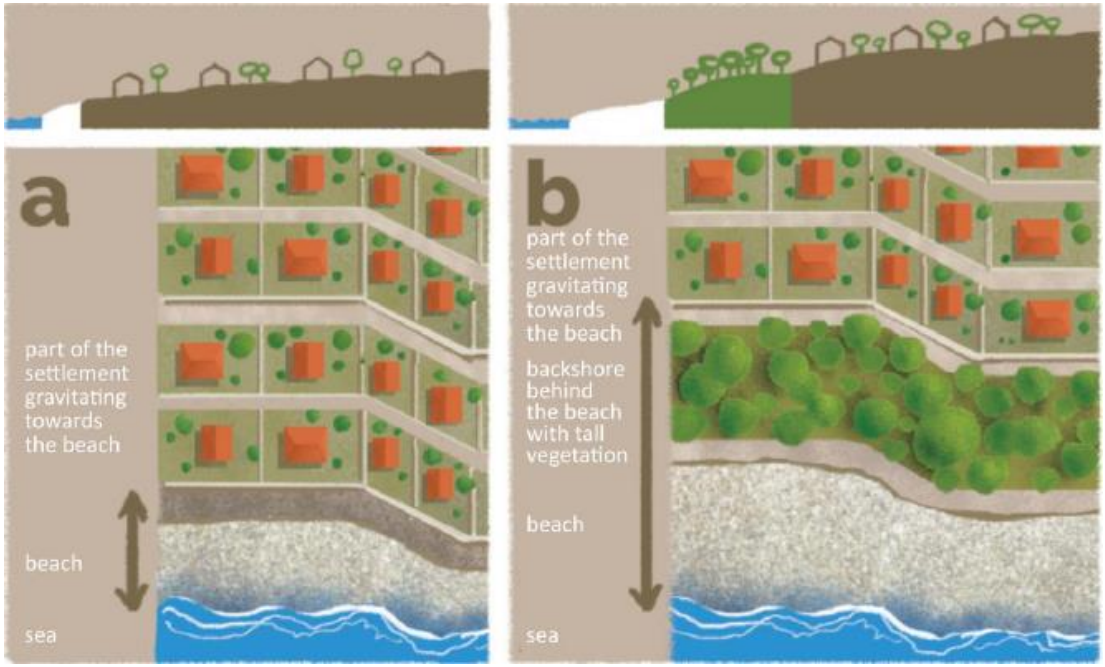
More than 40 adaptation options

SOCIETAL OPTIONS
GREEN OPTIONS
GREY OPTIONS

Adaptation options

SOCIETAL OPTIONS

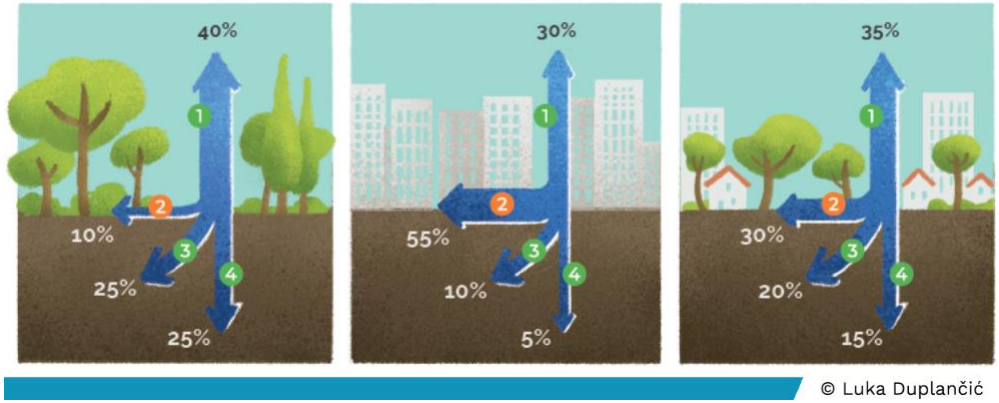
Coastal setback



Adaptation options

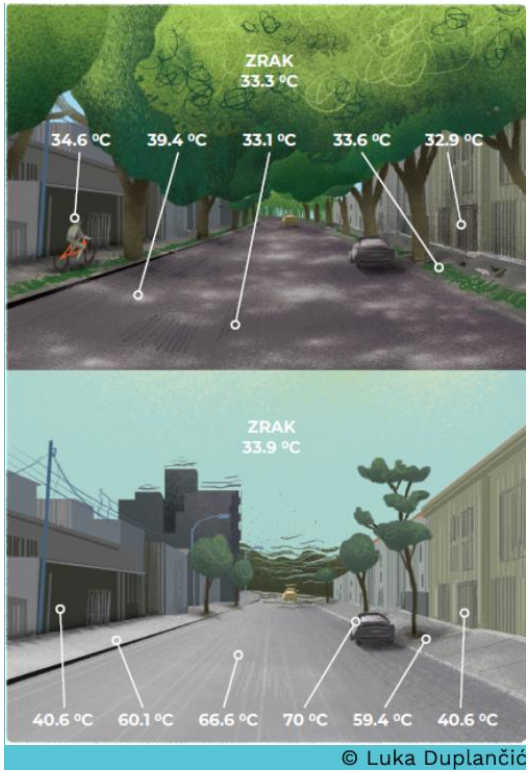
GREEN OPTIONS

Urban runoff



© Luka Duplančić

Urban Heat Island (UHI)



© Luka Duplančić

Adaptation options

GREEN OPTIONS

Green roofs

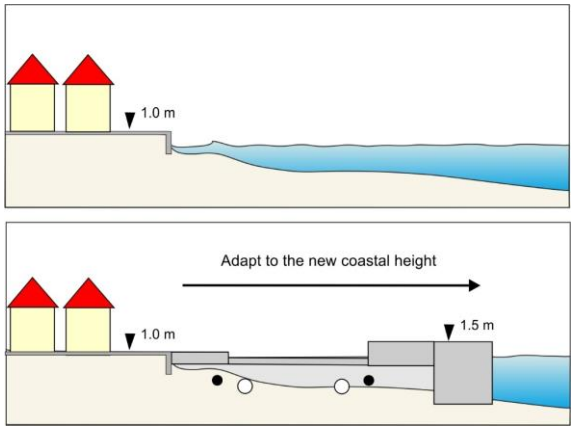
Wetland restoration

Protection and plantation of seagrass

Adaptation options

GREY OPTIONS

Raising and extending coastal land



Seawalls

Breakwaters

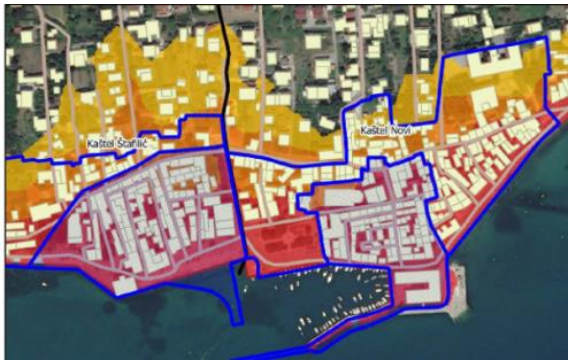
Case studies

11 case studies

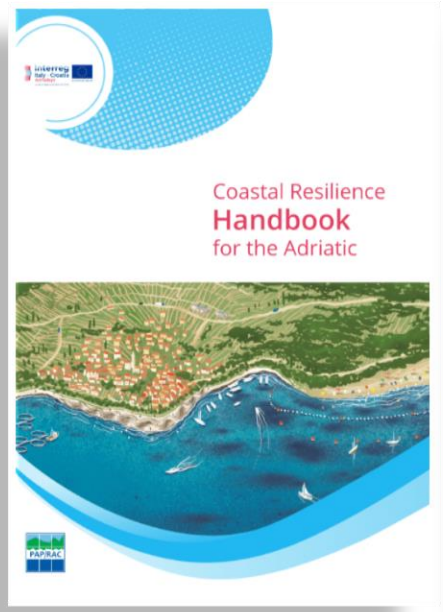
Retreat of Izola-Koper coastal road

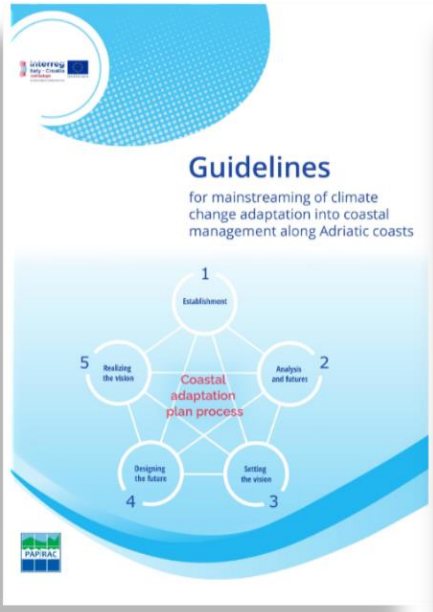
Dune restoration in Bevano sud

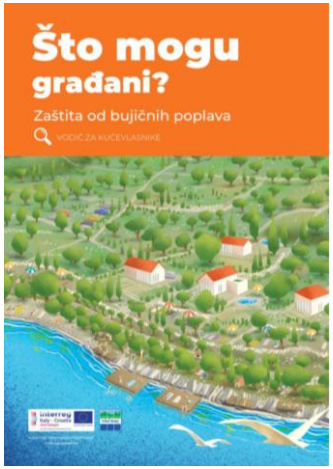
ICZM Plan Kaštela



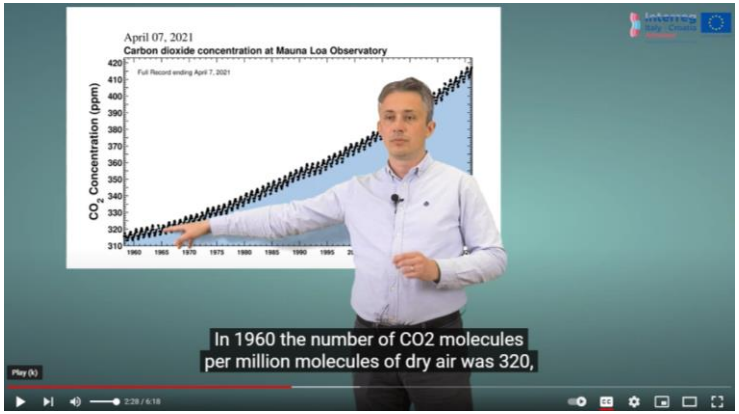
Guidelines and handbooks

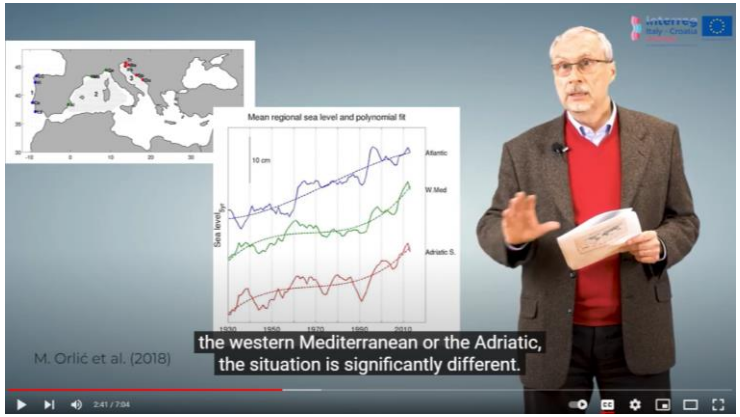


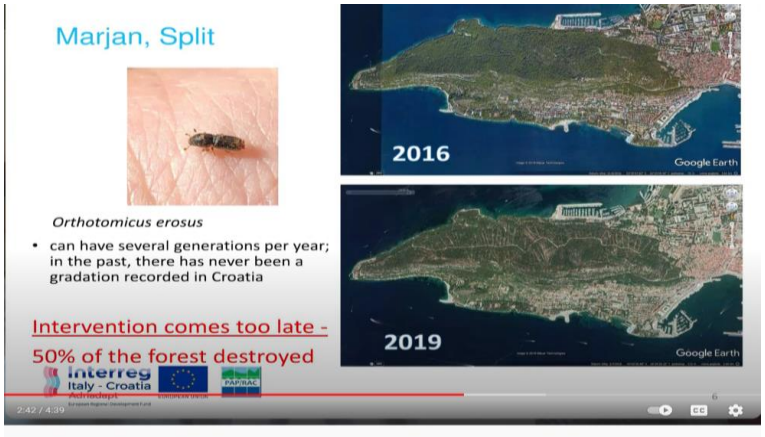




Video materials





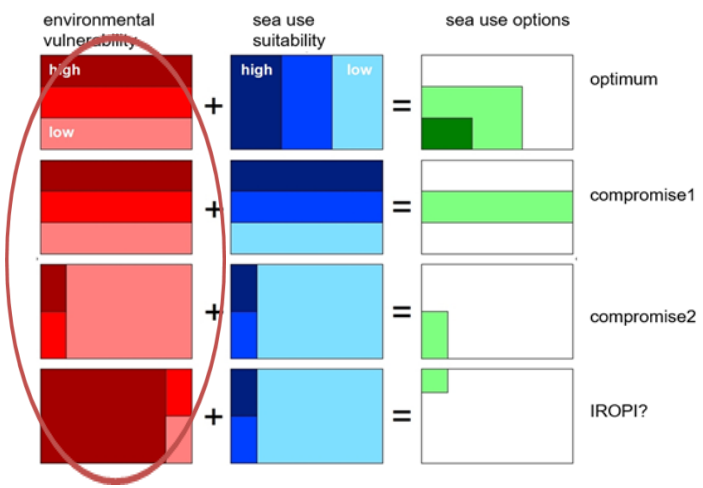


MSP Workspace

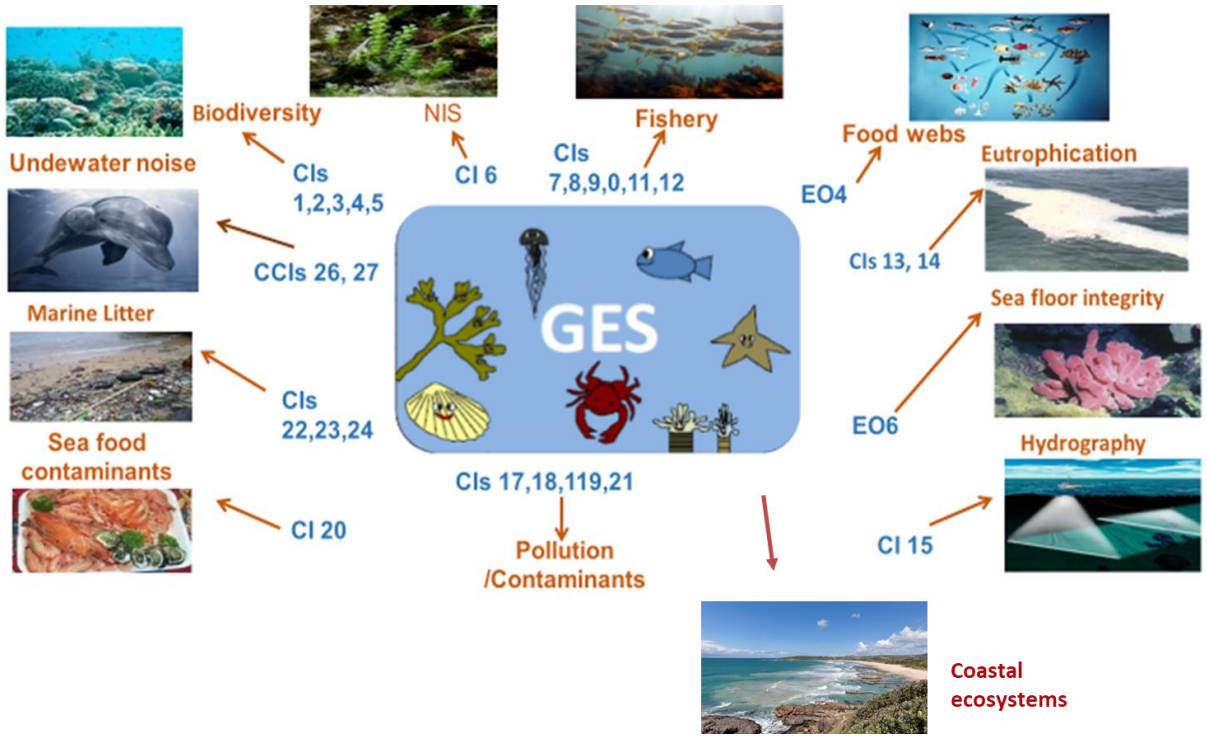
Ecosystem approach in MSP

IMAP

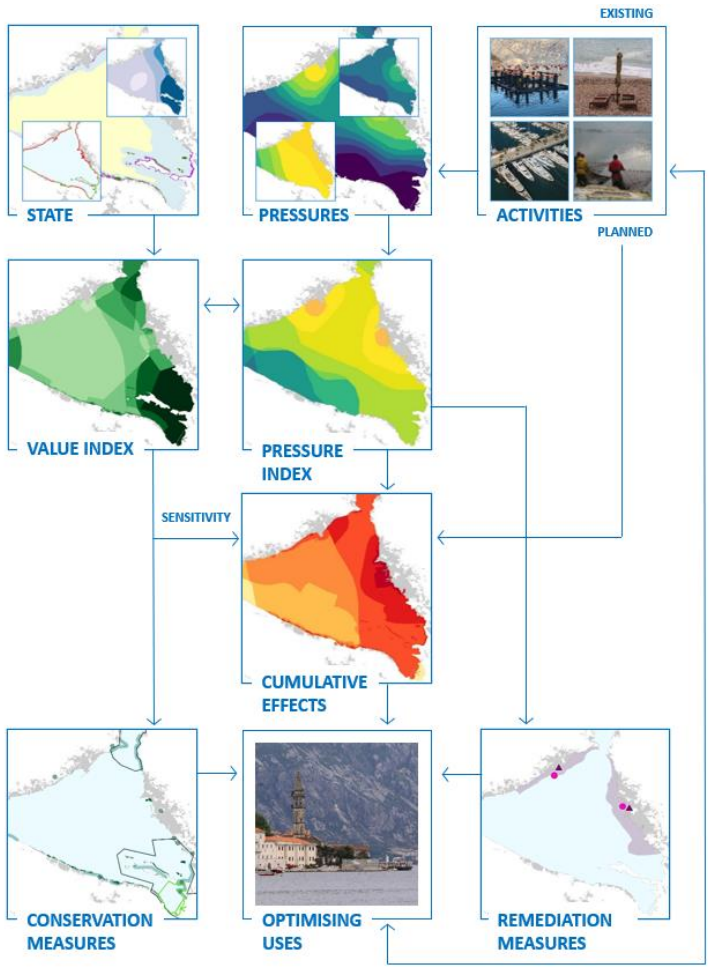
MSP



EcAp in the Barcelona Convention: IMAP Conceptual Framework for MSP

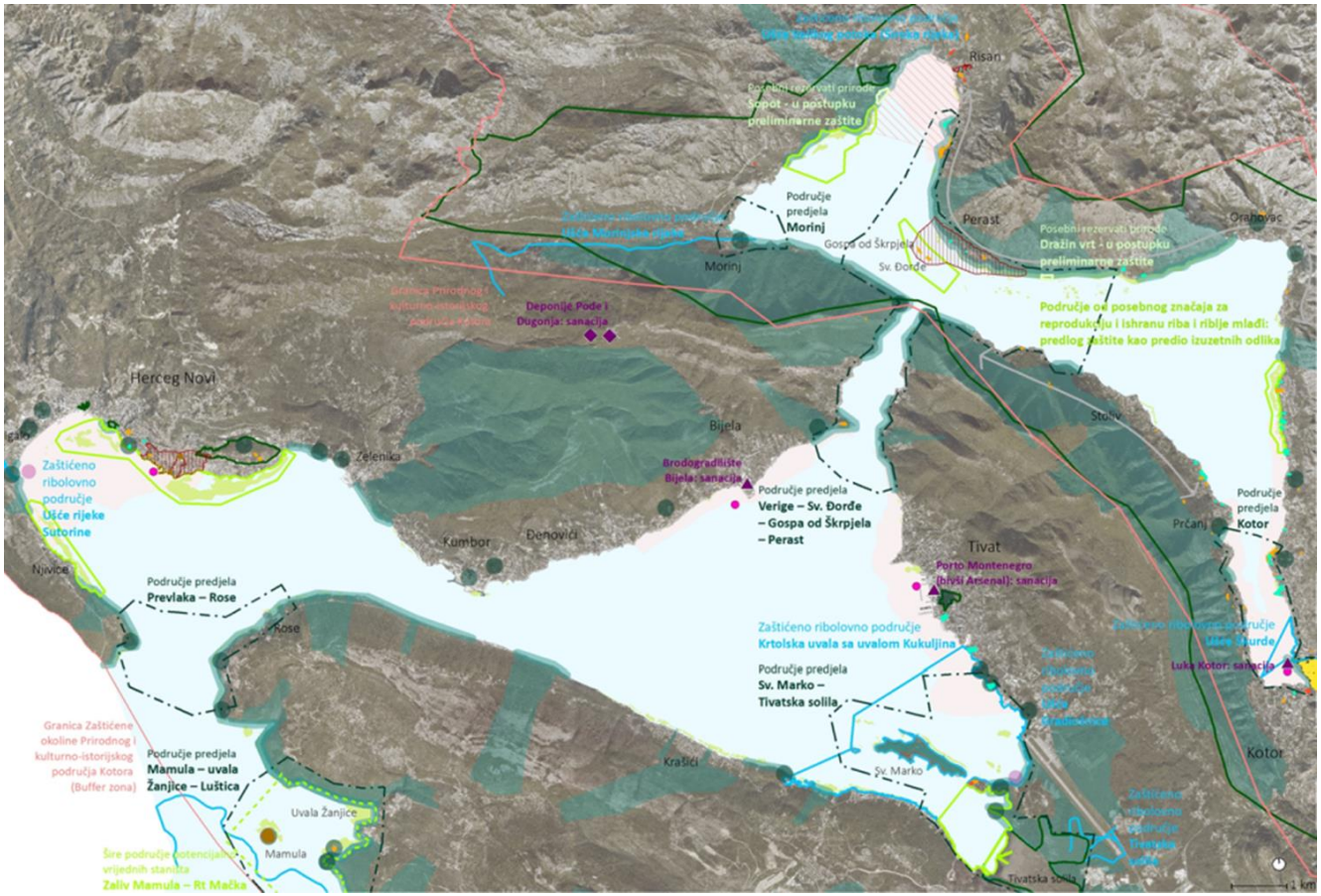


Case from Montenegro

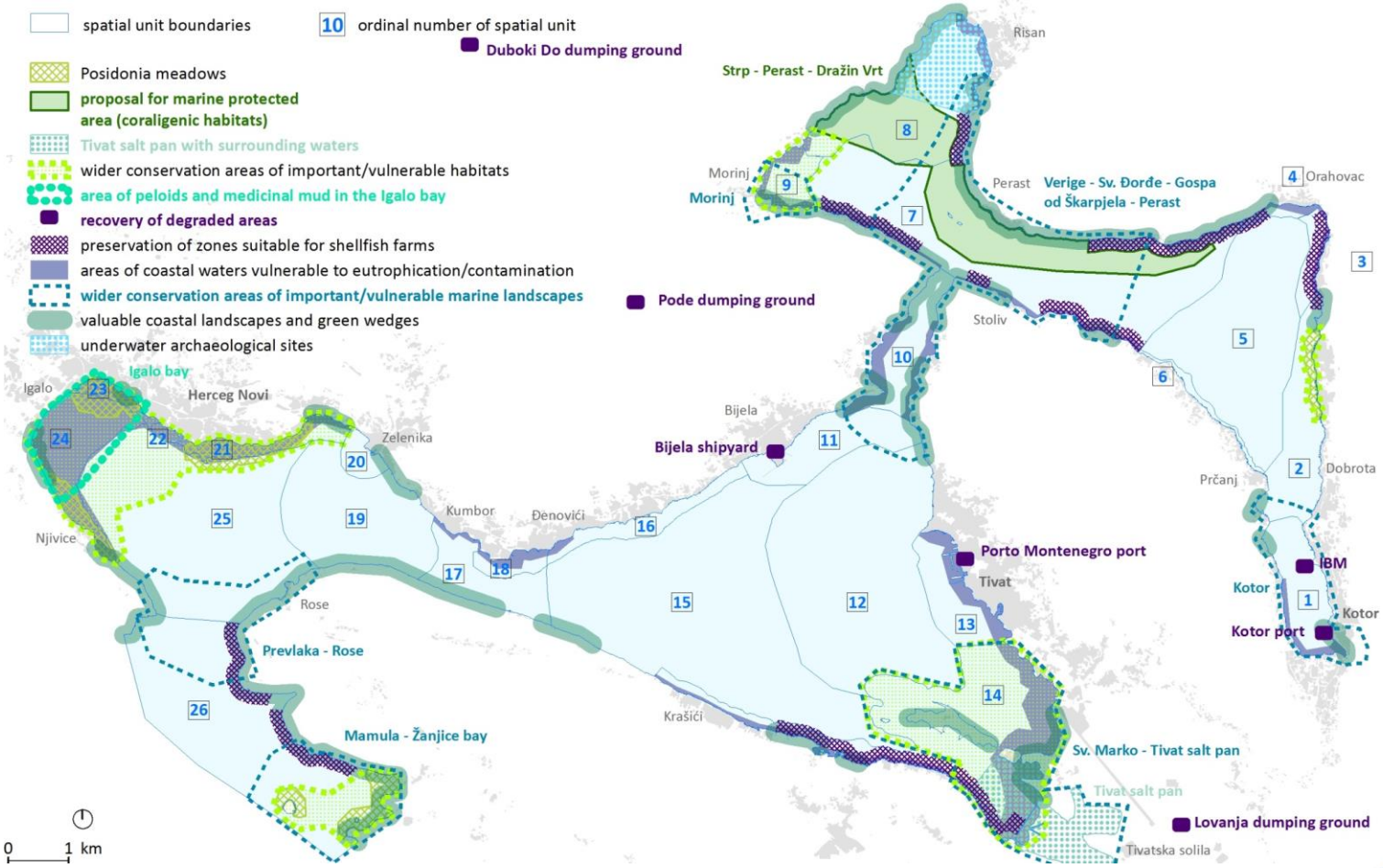


1. MONITORING AND SPATIALLY PRESENTING DATA
2. ASSIGNING VALUES
3. IDENTIFYING
4. PROPOSING MEASURES

Case from Montenegro



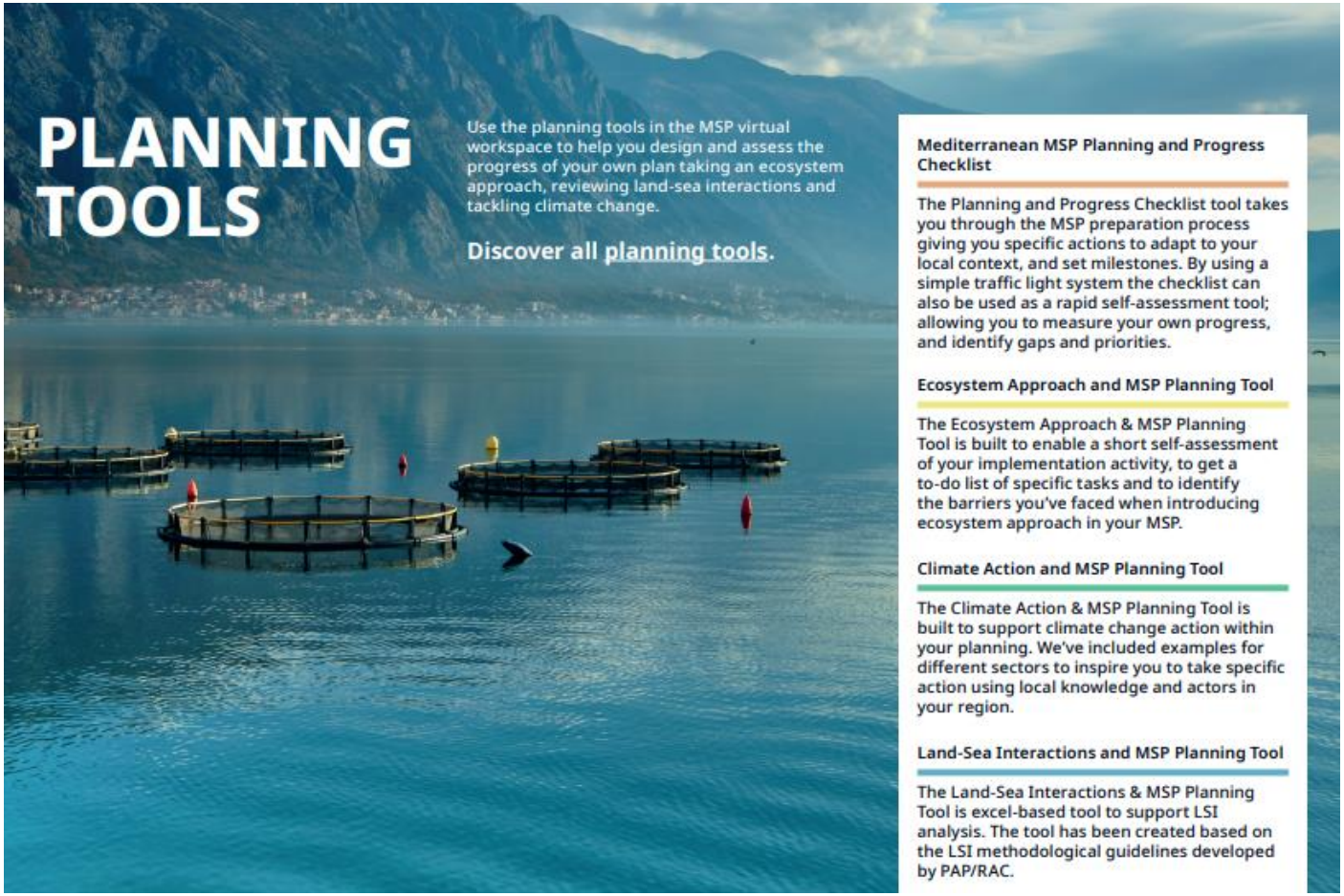
Planning recommendations: Environmental protection



Mediterranean MSP Workspace

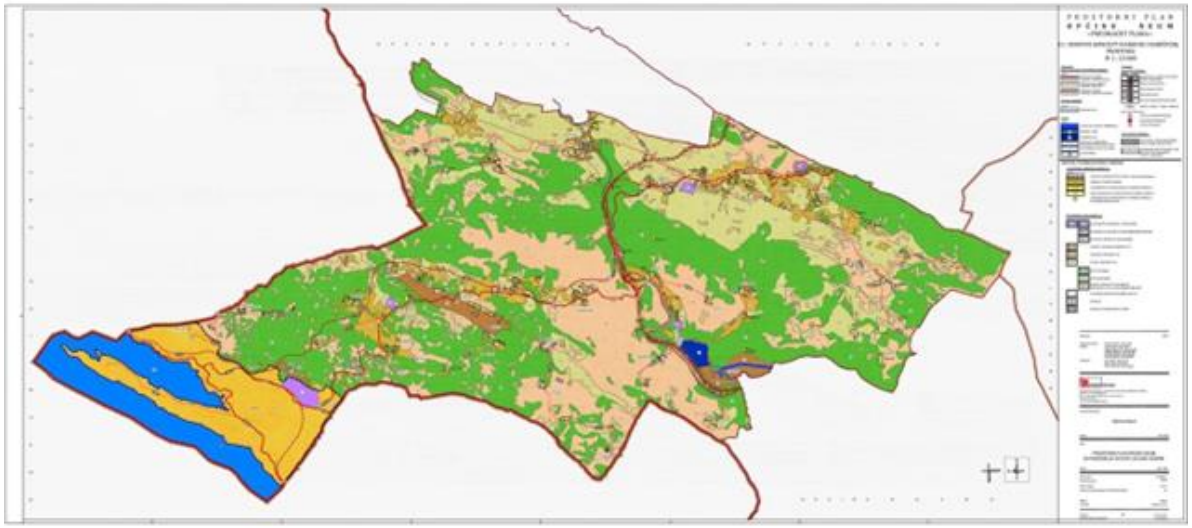
www.msp.iczmplatform.org

Mediterranean MSP Workspace



https://msp.iczmplatform.org/planning-tools/

CAMP
BOSNIA and
HERZEGOVINA



Project activities

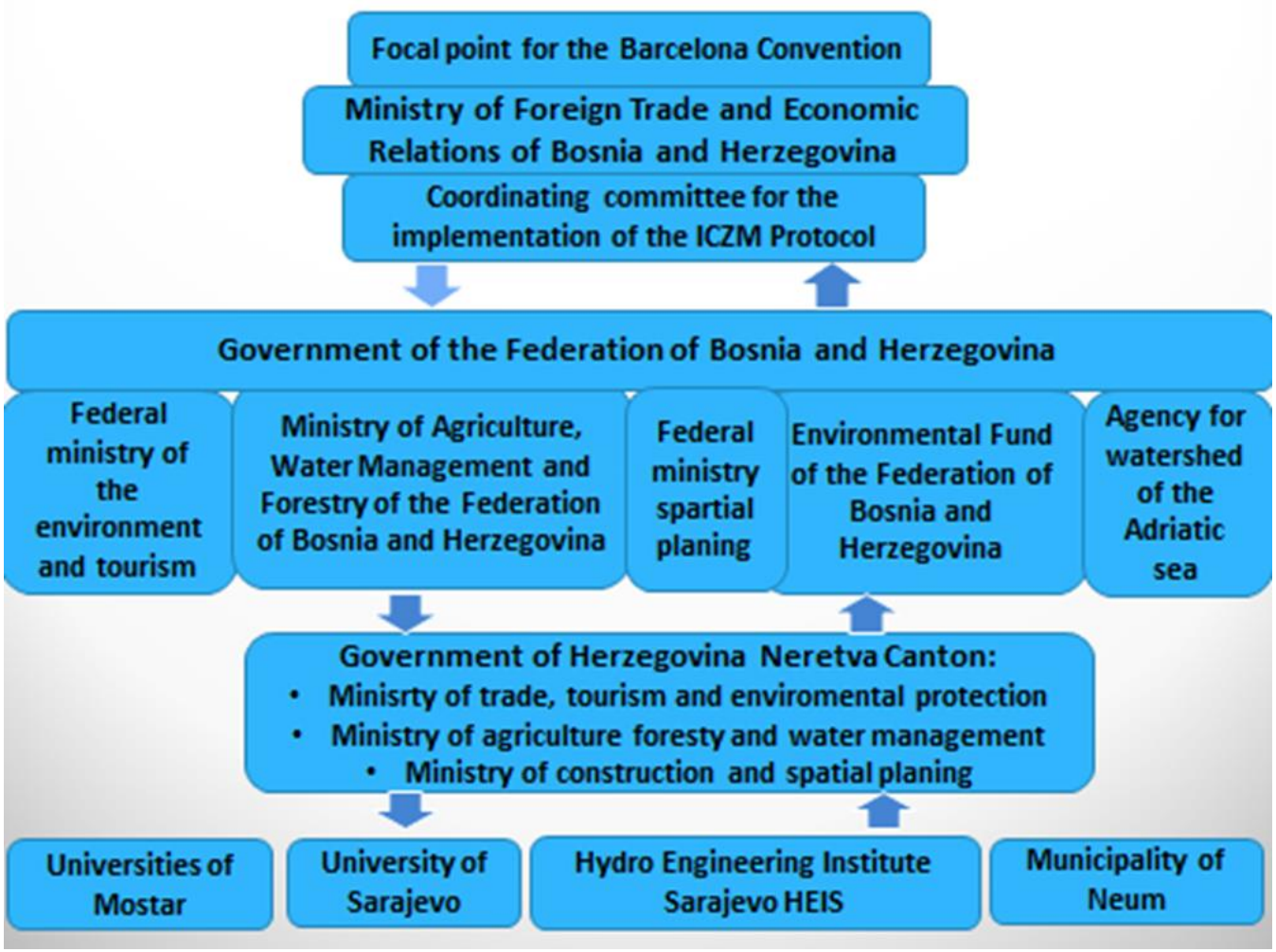
A. Horizontal activities

1. Project coordination, integration, dissemination of results
2. Capacity building/Awareness raising
3. Infrastructure of spatial data / information system

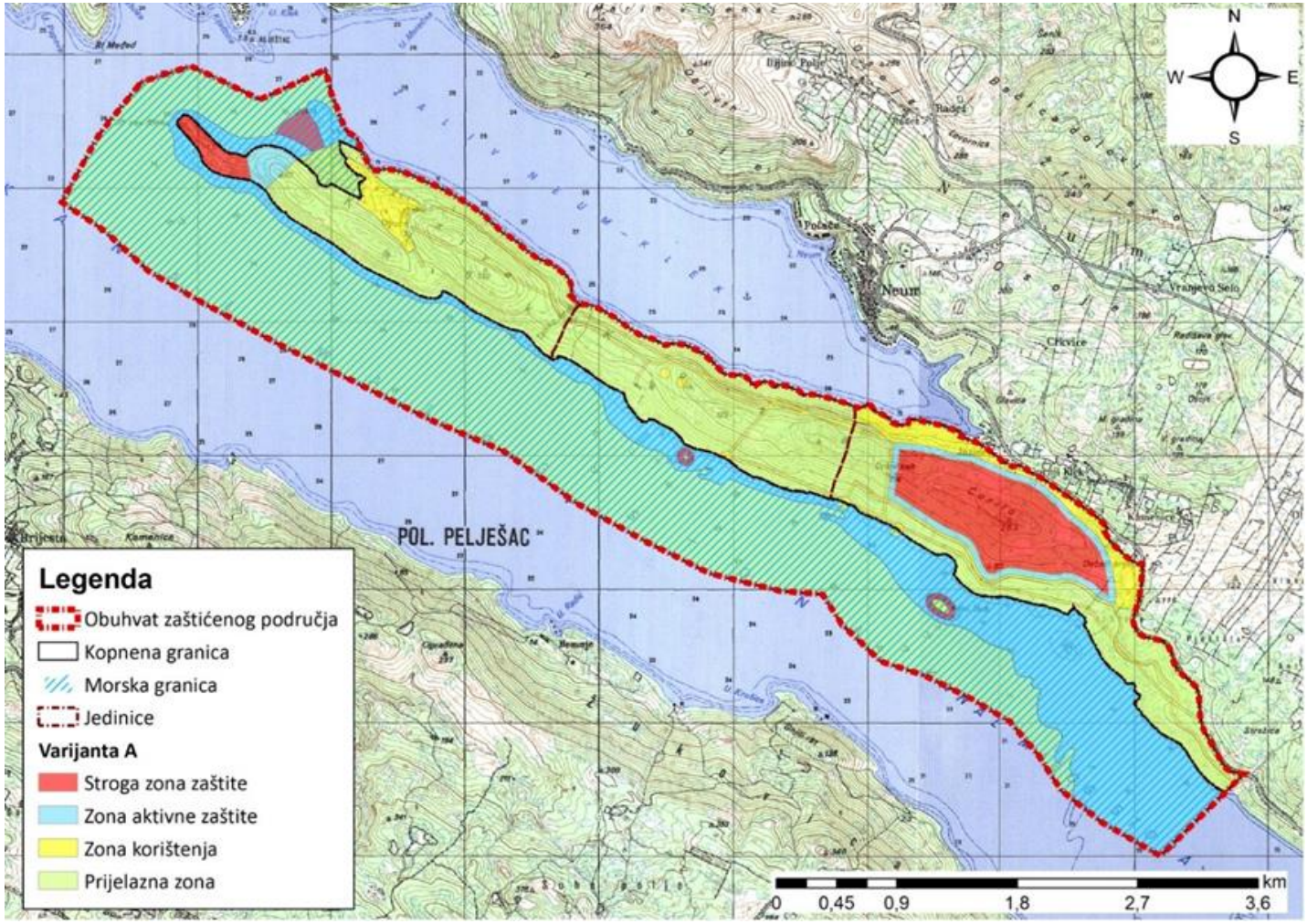
B. Individual activities: Integrated into Coastal plan

1. Institutional mechanism for ICZM
2. Marine habitats and MPA
3. Monitoring of marine and coastal environment
4. National Contingency plan
5. Sustainable tourism: from coastal to hinterland
6. Adaptation to climate change

1. Institutional mechanism for ICZM

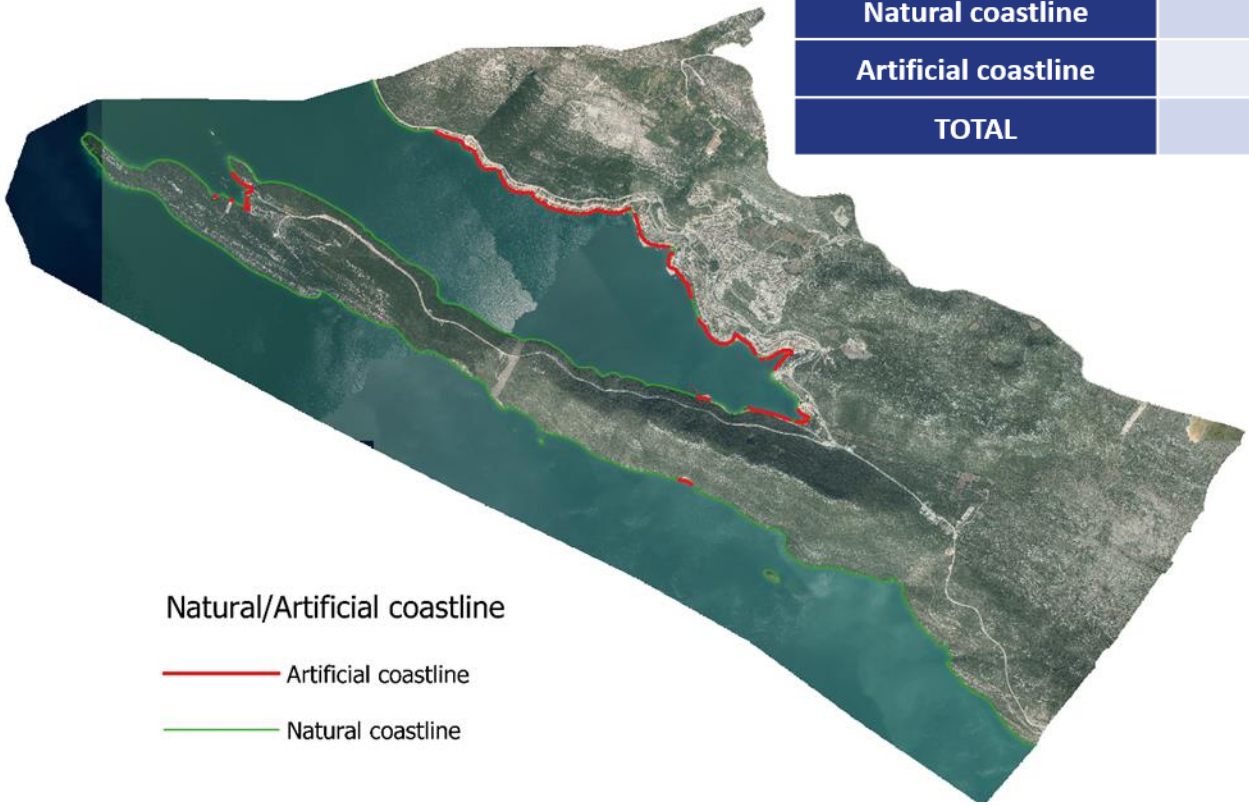


2. Marine habitats and MPA



3. Monitoring of marine and coastal environment

ART_NAT	Length [km]	Percentage [%]
Natural coastline	21.2	81.1
Artificial coastline	4.9	18.9
TOTAL	26.1	100



4. Sustainable tourism

Action plan: Project proposals

PROJEKT I. Označavanje atrakcija 'smeđom' signalizacijom'

PROJEKT V. Uređenje cikloturističke rute 'Neum' i okolnih ruta

PROJEKT II. Interpretacija i uređenje turističkih atrakcija

PROJEKT VI. Uvođenje sustava javnih bicikala

PROJEKT III. Širenje pješačke zone u obalnom dijelu Neuma

PROJEKT VII. Uvođenje spremnika za odvajanje otpada

PROJEKT IV. Brodski prijevoz iz Neuma do plaža na poluotoku Kleku

PROJEKT VIII. Destimulacija korištenja plaža za jednodnevne posjetitelje

5. Adaptation to climate change

Adaptation measures

	mjera	opis	procijenjene koristi	procijenjeni troškovi (KM)
4	Jačanje kapaciteta za protupožarnu zaštitu	izgradnja protupožarnih prosjeka i puteva (trošak oko 50.000 KM/km), nabavka opreme za ranu detekciju, nabavka opreme za gašenje požara	povećanje sigurnosti stanovništva, smanjenje šteta nastalih zbog požara, očuvanje bioraznolikosti, smanjenje potrošnje vode	2.500.000
5	Lokalna proizvodnja električne i toplotne energije	promocija i izgradnja solarnih elektrana (električna energija) i solarnih kolektora za grijanje sanitarne vode; izrada studije za čitavu Općinu i audita velikih turističkih kapaciteta; izgradnja punionica za električna vozila sa solarnim elektranama i baterijama	smanjenje vršnog opterećenja elektroenergetske mreže, smanjenje troškova za energiju, veći udio obnovljivih izvora energije i smanjenje neizravnih emisija stakleničkih plinova	3.000.000
6	Povećanje učinkovitosti korištenja energije i vode	promocija i provedba mjera učinkovitog korištenja energije i vode posebno u turističkim kapacitetima; korištenje učinkovitih dizalica topline za grijanje i hlađenje (temeljeno na korištenju otpadne vode), učinkovitih tuš baterija i dr.; rangiranje turističkih objekata i spram ugljičnog otiska	smanjenje vršnog opterećenja elektroenergetske mreže, smanjenje troškova za energiju, smanjenje neizravnih emisija stakleničkih plinova	5.000.000
7	Unapređenje sustava navodnjavanja u zaleđu	promocija i implementacija modularnih sustava za navodnjavanje na solarnu energiju; racionalno korištenje vode (uz korištenje kišnice i iskorištene vode); spremnici vode; edukacija poljoprivrednika o načinu obrade zemljišta s ciljem minimalnog gubitka vlage i učinkovitom navodnjavanju	smanjenje šteta u poljoprivredi zbog suša uz unapređenje poljoprivredne proizvodnje, zaštita bioraznolikosti	2.000.000

Interreg ADRION ADRIATIC-IONIAN
EUROPEAN UNION
European Regional Development Fund - Instrument for Pre-Accession II Fund
EUSAIR FACILITY POINT

EU Strategy for the Adriatic and Ionian Region
EUSAIR

Happy

Thank you for your attention!

UNEP Mediterranean Action Plan
Priority Actions Programme
Regional Activity Centre (PAP/RAC)

Kraj Sv. Ivana 11
21000 Split, Croatia
tel: + 385 21 340 470
e-mail: marko.prem@paprac.org

http://paprac.org
http://iczmplatform.org

PAP/RAC