

METHODOLOGICAL GUIDELINES TO PERFORM LSI ANALYSIS WITHIN MSP IN THE MEDITERRANEAN CONTEXT

Operative guidelines to develop analysis of land-sea interactions, as part of the marine spatial planning (MSP) process, and assessment of feasibility of application

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THE BARCELONA CONVENTION CONTEXT

CONCEPTUAL FRAMEWORK FOR MARINE SPATIAL PLANNING IN THE MEDITERRANEAN



Conceptual Framework for MSP in the Mediterranean (2018)

- To introduce MSP in the framework of the Barcelona convention
- To link MSP to ICZM considering MSP as the main process/tool for the implementation of ICZM in the marine part of the coastal zone
- To provide a common context for the implementation of MSP in the Mediterranean



ICZM Protocol (2008)



Common **Regional** Framework for **Integrated** Coastal Zone Management



Common Regional for ICZM
in the Mediterranean (2019)

BUILDING ON AVAILABLE TOOLS AND EXPERIENCES



The inclusion of land-sea interactions (LSI) in the Maritime Spatial Planning (MSP) Directive recognises that effective maritime spatial planning cannot take place unless consideration is given to the interface between terrestrial and marine environments. In particular, Article 13 states that MSP should aim to "integrate the marine dimension of some coastal uses or activities and their impacts and ultimately allow an integrated and strategic vision". This brochure has been produced to give an understanding of how to address LSI in the development of marine spatial plans.



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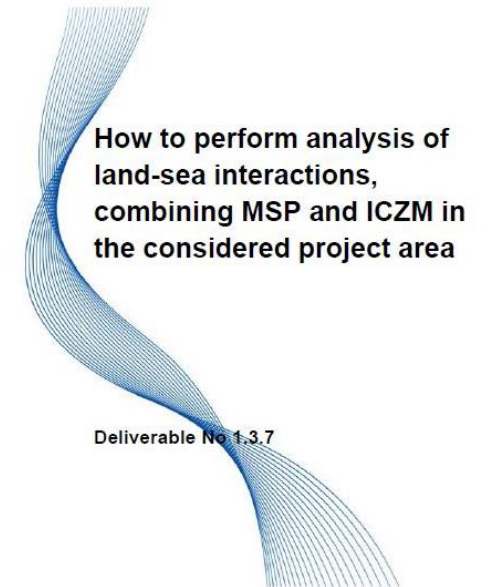
Relationship between LSI and ICZM

December 2018



Supporting Implementation of Maritime Spatial Planning in the Western Mediterranean region

European Commission
 Directorate-General for Maritime Affairs and Fisheries
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How to perform analysis of land-sea interactions, combining MSP and ICZM in the considered project area

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ESPON
 Inspire policy making by territorial evidence
 ESPON 2013 Programme / Map of the Month

"Hot Spots" of land-sea interactions

Technology Map (Hotspots)
 The map shows the geographical distribution of hotspots of land-sea interactions. The hotspots are defined as areas of coastal vulnerability and/or areas of high land-sea interaction. The map is divided into four categories: High Intensity, Medium Intensity, Low Intensity, and No Data.

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THE PROPOSED GUIDELINES: OVERVIEW

OBJECTIVE: Provide a **practical** and **operative** methodology that can help analysis of LSI in the context of MSP and can be adopted across the Mediterranean

The methodological guidelines foresee the compilation of a **catalogue of interactions**, populated with semi-quantitative and quantitative information

The guidelines propose a **step-wise, tiered approach** and identifies **14 Steps**

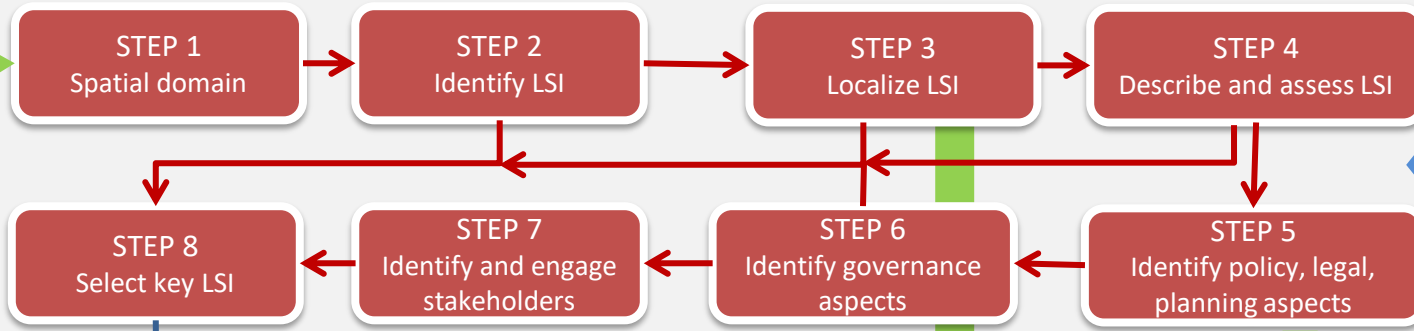
Stakeholder engagement is a key component of the proposed methodological guidelines

MSP PROCESS

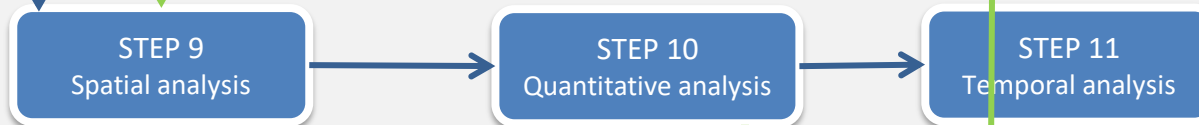
LSI ANALYSIS

OTHER PLANNING PROCESSES

PART A – LSI STOCKTAKING



PART B – LSI IN-DEPTH ANALYSIS



PART C – INFORMING THE PLAN



MSP Plan spatial domain
Stakeholder engagement
MSP main issues

Key sector developments
Planning, policies, regulatory sector elements
Territorial (land) planning developments








LSI analysis of the main MSP issues

Additional interactions generated by the planning choices

Outcomes from LSI analysis to feed the MSP plan

Outcomes from LSI analysis relevant for terrestrial or sectorial planning

STREAMLINED WITH THE MSP PROCESS CHECKLIST TOOL

CATALOGUE OF INTERACTIONS													
LSI IDENTIFICATION, LOCATION, DESCRIPTION (Step 1-4)							POLICY ANALYSIS (Step 5)				ASSESS		
NATURAL INTERACTIONS: SEA-TO-LAND													
FACTORS/PROCESSES DETERMINING INTERACTIONS	INTERACTION	LOCATION (GEOGRAPHIC)	TYPE OF COASTAL/MARINE ZONE	LOCATION (PLAN AREA)	SPACE OF INTERACTION (AT SEA)	DESCRIPTION OF INTERACTION	REGULATIONS AND PLANS				RELEVANCE OF INTERACTIONS		
							Legislation	Plans	Other documents	Gaps/Conflicts/nergies	Environment	Society	Fishing
Examples: Sea-level-rise, severe meteorological events, algae bloom, underwater tectonic activities, etc.	Examples: coastal erosion, saline intrusion, marine flooding										Positive/Negative Low/Medium/High	Positive/Negative Low/Medium/High	Positive/Negative Low/Medium/High
NOTES			Use the drop-down menu	Use the drop-down menu	Use the drop-down menu						You can describe the relevance with few keywords You can assess the relevance by using this scale: Negative - High  Negative - Medium  Negative - Low  Neutral  Positive - Low  Positive - Medium  Positive - High 		

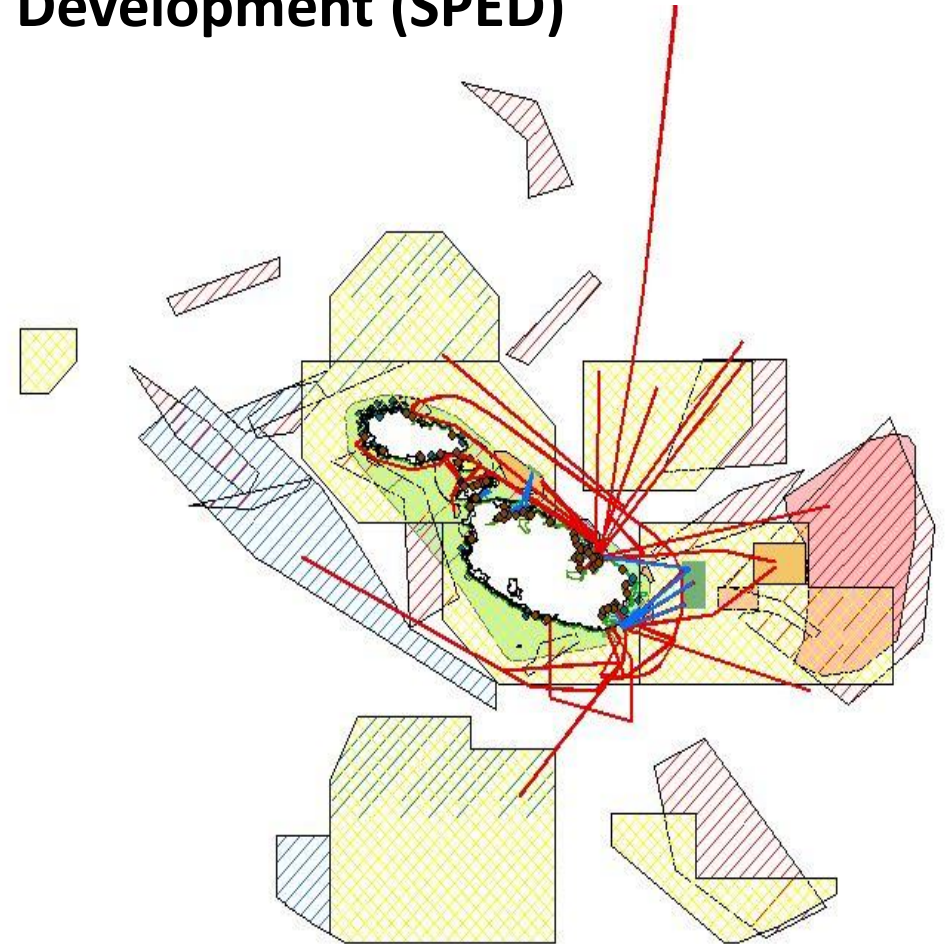
TEST CASES: MALTA

Revision of the Strategic Plan for the Environment and Development (SPED)

PARTICIPATORY PROCESS

- Prepare a LSI catalogue
- Identify the most relevant LSI
- Share motivations for selection
- Qualitatively assess the relevance of LSI

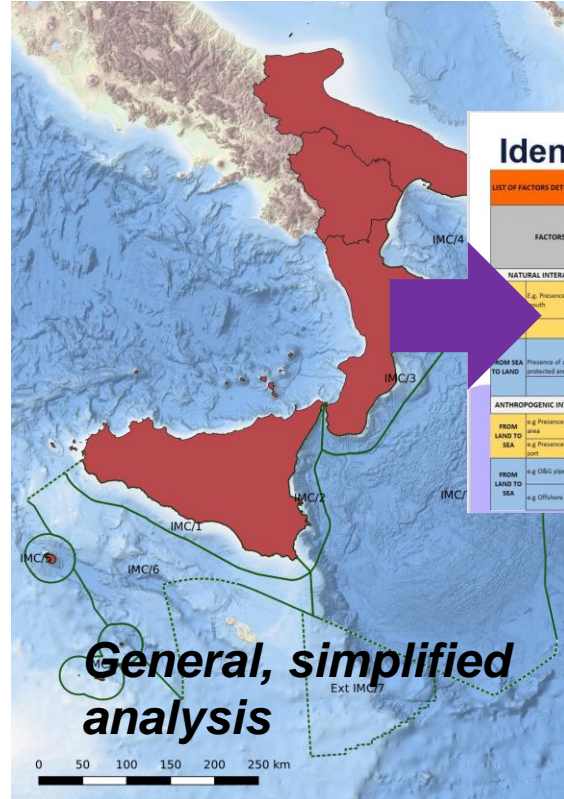
TYPE OF PROCESS	RELEVANCE									
	ON ENVIRONMENT	ON SOCIETY	ON USES AND ACTIVITIES							
			Professional fishery	Recreational fishery	Aquaculture	Maritime transport	Energy	Coastal tourism	Maritime tourism	Protected areas
Marine transport (Cargo & Storms)	Negative - Medium	Positive - High	Neutral	Neutral	Negative - Low	Positive - High	Positive - Medium	Positive - High	Positive - High	Negative - Medium
Storms	Negative - Low	Negative - Low	Negative - Low	Negative - Low	Negative - Low	Negative - Medium	Negative - Low	Negative - Medium	Negative - Low	Negative - Medium
Breeding Grounds (Turtles & Seabirds)	Positive - High	Positive - High	Neutral	Neutral	Negative - Low	Neutral	Neutral	Positive - Medium	Positive - Medium	Positive - High
Construction and Demolition waste	Negative - Medium	Positive High/Negative Medium (depending on)	Neutral	Negative - Low	Neutral	Negative - Low	Neutral	Negative - Low	Negative - Low	Negative - Low
Coastal Erosion	Negative - Medium	Negative - High	Negative - Low	Negative - Low	Neutral	Neutral	Negative - Medium	Negative - High	Negative - Medium	Negative - Medium



Spatial distribution of LSI in the Maltese islands: understanding spatial features of LSI and identification of hot-spots

TEST CASES: ITALY

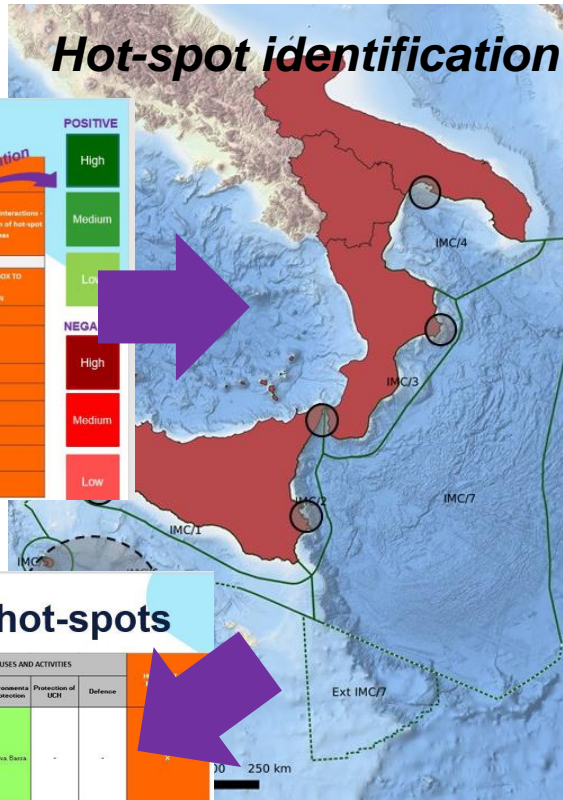
The Italian national MSP process: CONCEPTUAL PROCESS



Identification and prioritization of LSIs

LIST OF FACTORS DETERMINING INTERACTIONS, DESCRIPTION OF INTERACTIONS, IDENTIFICATION OF MOST IMPORTANT INTERACTIONS AND HOT-SPOT AREAS

FACTORS	AREA OF INTERACTION (NAME)	LOCATION (GEOGRAPHIC)	DESCRIPTION OF THE INTERACTION	RELEVANCE OF INTERACTORS FOR ECONOMIC USES AND ACTIVITIES							Selection of interactions Identification of hot-spot areas	
				Fishing	Maritime transport	Energy	Tourism	Environmental protection	Production of UCH	Defence		Society
NATURAL INTERACTIONS												
FROM SEA TO LAND	Presence of a river mouth			Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active
FROM LAND TO SEA	Presence of a marine protected area			Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active
ANTHROPOGENIC INTERACTIONS												
FROM LAND TO SEA	Presence of an urban area			Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active
FROM LAND TO SEA	Presence of a maritime port			Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active
FROM LAND TO SEA	Presence of O&G pipelines			Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active
FROM LAND TO SEA	Presence of Offshore Wind Farms			Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active	Positive/Neg active



In-depth analysis of LSI hot-spots

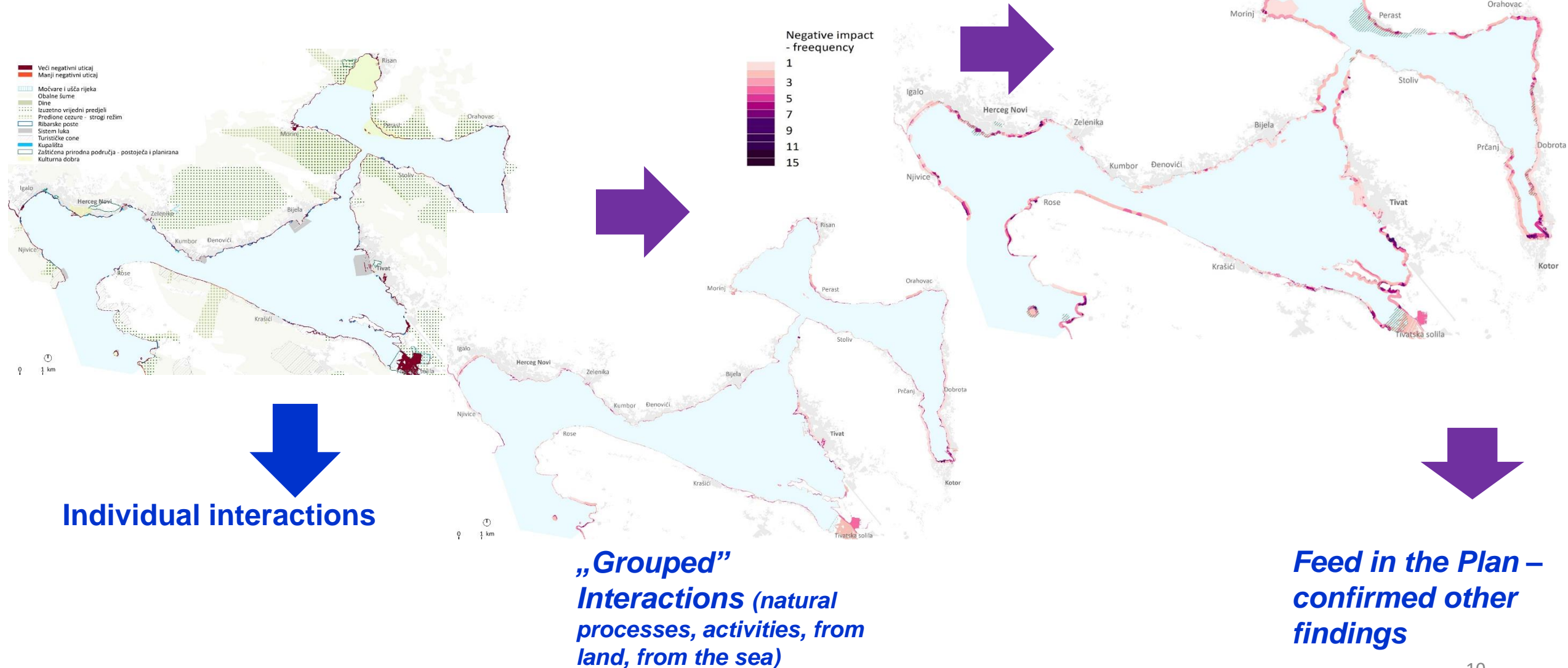
HOT-SPOT NAME	LOCATION	DESCRIPTION	RELEVANCE OF INTERACTORS FOR ECONOMIC USES AND ACTIVITIES							Priority
			Fishery & Aquaculture	Maritime transport	Energy	Tourism	Environmental protection	Production of UCH	Defence	
Maree del Valco	PC1	Infrastruttura di interazione mare di origine naturale legata alla presenza di un sistema di canali di drenaggio. L'area è caratterizzata da un ridotto apporto sedimentario dall'entroterra a causa della presenza della diga di controllo della sabbia. L'area è di competenza della Marina di Stato e della Marina di Stato. L'area è di competenza della Marina di Stato e della Marina di Stato.	Positive/High	Positive/High	Positive/High	Positive/High	Positive/High	Positive/High	Positive/High	High
Siracusa e Augusta	PC2	L'area è caratterizzata da interazioni mare di origine naturale determinate da processi erosivi che avvengono nella zona particolare di Siracusa. L'area è di competenza della Marina di Stato e della Marina di Stato.	Positive/High	Positive/High	Positive/High	Positive/High	Negative/Media	Positive/High	Positive/High	High
Stretto di Messina	PC3	L'area è caratterizzata da interazioni mare di origine naturale determinate da processi erosivi che avvengono nella zona particolare di Messina. L'area è di competenza della Marina di Stato e della Marina di Stato.	Positive/High	Positive/High	Positive/High	Positive/High	Positive/High	Positive/High	Positive/High	High
Costone	PC4	L'area è caratterizzata da interazioni mare di origine naturale legate alla presenza di un sistema di canali di drenaggio. L'area è di competenza della Marina di Stato e della Marina di Stato.	Positive/High	Positive/High	Positive/High	Positive/High	Positive/High	Positive/High	Positive/High	High

Italian maritime areas for MSP:
 Tyrrhenian Sea – Western Mediterranean
 Ionian Sea - Central Mediterranean
 Adriatic Sea

TEST CASES: MONTENEGRO

Hot-spot identification

The Montenegrin national MSP process: **MAPPING PROCESS**



CONCLUSIONS SO FAR

- ✓ The guidelines shall be adopted in a flexible manner to reflect the state and needs of MSP development in a country
- ✓ The concrete application of the methodological guideline requires dedicated efforts in terms of resources and time and data availability
- ✓ The experience on ICZM should be capitalized and facilitate engagement of actors and collection of knowledge
- ✓ The geographic scale influences the LSI analysis in terms of selection of relevant formation, availability of needed information, depth of the analysis, type and entity of the interactions identified. When applying the methodological guideline, the scale of analysis shall be clearly defined.
- ✓ Collaboration, co-production of knowledge and sharing of needs and priorities between maritime and terrestrial planning communities are fundamental to pave the way toward the best practice of planning.

Thank you!

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