TRANSBOUNDARY
CAMP OTRANTO PROJECT

ANNEXES
Preliminary Testing

ICZM METHODOLOGICAL GUIDANCE

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Table of contents

Annex 1:
Matrix of Interactions: Application of the Analysis Methodology on the CAMP Area and Evaluation of Environmental Interactions 1

1. Application of the Methodology to the CAMP Area 3
Data Collection and Quality 3

2. Application to Italian Coastal Areas 4
2.1. Economic Activities Evaluation 4
2.2. Environmental Pressure Evaluation 4
2.3. Environmental Status Evaluation 7
2.4. Interactions 7

3. Application to Albanian Coastal Areas 19
3.1. Economic Activities Evaluation 19
3.2. Environmental Pressure Evaluation 19
3.3. Environmental Status Evaluation 22
3.4. Interactions 22

4. Identification of the Main Interaction and Conclusions Including Gaps and Transboundary Aspects 34
4.1. Matrix of the Main Interactions 34
4.2. Gaps 40
4.3. Transboundary Aspects 40
4.4. Operational Aspects 41

5. Additional Resources 42

6. Reference Maps 43

7. References 45

Annex 2:
Analysis of the Provisions of the Main Relevant Documents of the UNEP/MAP Barcelona Convention System 47

Annex 3:
Operational Recommendations to Address the Negative Interactions, Thus Contributing Towards Implementing the CRF on ICZM 81

Annex 1:
Matrix of Interactions:
Application of the Analysis Methodology on the CAMP Area and Evaluation of Environmental Interactions

1. Application of the Methodology to the CAMP Area

The present document deals with the application of the methodological guidance for achieving a Good Environmental Status (GES) through Integrated Coastal Zone Management (ICZM) to the CAMP Otranto test areas, for the respective Albanian and Italian coastal zones.

As shown in the following section, in order to assess the cumulative effects of the environmental pressures/impacts, the proposed quali-quantitative scoring system described in the developed DPSIR Assessment Methodology allows us to aggregate and rank elements in the pressure/impacts matrices using specific parameters, such as ICZM zone, pressure type and type of underlying Economic driver.

Furthermore, the links identified in the impact matrices can be traced back to the main driving Pressures and Economic Activities, tracing back the EA->EP->SC flow of interactions in relation to the distribution and composition of the most relevant EA/EPs.

The effectiveness and significance of this trace-back procedure is strongly subject to the level of detail and completeness available in the starting dataset.

Data Collection and Quality

The data collection process was carried out jointly by the Data Management team, the Feasibility Study team and the Methodological Guidance team of the CAMP Otranto project, in order to ensure a coordinated and coherent approach.

Data availability. Several issues were encountered during the data collection stage, related to the completeness of sources with respect to all DPSIR elements (pressures, states, and impacts), as well as to the non-uniform amount of data available for the different countries involved in the study. A restricted amount of information was indeed available for the Albanian coast, compared to the Italian one. As discussed later, these aspects represented a limiting factor – for both the Italian and Albanian cases – during the application of the proposed methodology. In addition, the temporal aspect of the DPSIR causal linking was partly compromised by the scarcity and inhomogeneity of (recent) information sources. These circumstances represented an important scenario capable of stressing the proposed approach and forcing its application to difficult datasets, while testing its flexibility and adaptability to a diverse degree of aggregation and geographical reach.

Data questionnaire. In order to aid and organise the interaction with the relevant stakeholders (either national or local) during the data collection stage, a dedicated questionnaire was developed (see Annex I) to guide data gathering and processing coherently with the Methodological Approach structure.

Data management. All the information and data used for testing the assessment methodology within the CAMP Area are public. The related references are listed in Section 8. The collected geographical data (e.g., Shape files, WMS etc.), which are already grouped in the References and in the elaborated GIS project, were reprocessed and aggregated for the purpose of their normalisation and application in the entire CAMP area through the use of Expert Judgement.

Handling data gaps. As a result of the scarcity of information, various gaps were identified and highlighted during the data analysis stage. The following strategy was implemented to address these gaps: if the absence of data for a specific element of analysis (e.g., pressure or impact) was simply due to the absence or negligible presence of such an element in the area, the element was classified as not present or relevant, and not propagated to the following analysis stages. On the contrary, if data positively identified the presence of a specific element (e.g., pressure or impact) in the area being tested, but was insufficiently precise to allow a clear classification of such an element in the frame of the employed scoring system, the element would be regarded as present with a nominal weight derived either from Expert Judgement or from an ancillary data source representative of similar areas or situations. This approach was implemented to increase the stability of the tool with respect to cumulative pressure assessment.

2. Application to Italian Coastal Areas

2.1. Economic Activities Evaluation

The analysis of the Economic Activities (EA) is presented in Figure 1, including 10 main sectors (A1-A10) and the relative categories of EAs. The scoring 1-50 is used to classify the relative presence of each activity.

The predominant EAs detected for the Italian area are transport (A6), cultivation of living resources (A5), physical restructuring of rivers, coastline or seabed (water management) (A1) and tourism and leisure (A8). Furthermore, various information gaps were identified in the data (MSP, 2022) (Arpa Puglia, 2022) (Puglia, 2021). If the data identified the presence of a specific EA but was insufficiently precise to allow the clear classification of such element in the frame of the scoring system, the element was regarded as present and was identified as P (plausible) in the column "RLP" of the Figure 1.

2.2. Environmental Pressure Evaluation

The proposed classification table for Pressures is presented in Figure 2, including 5 main pressure types (P1-P5, column TYPE) and relative categories.

The EP acronym hereby employed refers to a specific EP category (e.g. "Input of nutrients – including organic matter" or "Input of litter – solid waste matter, microsized litter").

The classification of the EP levels is split into the 4 ICZM zones.

The column "Overall EPL" reports the value of the pressure level detected in the analysis area, while the column "transboundary exogenous EPL quota (%)" provides details of the percentage of such pressure generated by sources external to the analysis area. The third column, on the other hand, indicates the share of pressure actually determined by sources internal to the analysis area.

The results show that the most relevant EP type present in the Italian side of the CAMP area is the cultivation/ artificialisation of natural habitat (P4.5) and the disturbance, injury and death of species (P4.4), with the highest scores associated with the landward zone.

In order to carry out a more complete and exhaustive analysis, for the pressures for which it was not possible to find information, the column indicating a data gap was ticked and a value was assigned in line with that attributed to the anthropogenic activities that potentially generate the specific pressure.

EA TABLE						
TYPE	ECONOMIC ACTIVITY	CODE	RLP	DATA GAPS*	TRANSBOUDARY POTENTIAL	
					The EA has an intrinsic transnational scope or has localized close to or beyond/across transnational borders?	The EA has the potential to generate EPs capable of diffusing, propagating, or acting at a transnational level?
Physical restructuring of rivers, coastline or seabed (water management)	Land take for urban industrial and agricultural uses	A1.1	42		No	No
	Infrastructure related to coastal/watercourse morphology alteration (dams, canalisatition, trenching, ports)	A1.2	p	YES	No	YES
	Infrastructure for coastal resilience/defence and flood protection	A1.3	p	YES	No	No
	Offshore structures (other than for oil/gas/renewables)	A1.4	10		YES	YES
	Utilization of natural resources: dredging and depositing (coastal and maritime areas)	A1.5	p	YES	No	No
Extraction of non-living resources	Utilization of natural resources: extraction/mining of sand, gravel, rocks, minerals	A2.1	28		No	No
	Utilization of natural resources: extraction of oil and gas and relative infrastructures	A2.2	15		YES	YES
	Utilization of natural resources: desalination plants	A2.3	p	yes	No	No
	Utilization of natural resources: water extraction	A2.4	p	YES	No	No
Production of energy	Energy infrastructures: renewables	A3.1	12		YES	YES
	Energy infrastructures: non-renewables	A3.2	24		No	No
	Energy transmission (including cables and pipelines)	A3.3	27		No	No
Extraction of living resources	Fish and shellfish harvesting	A4.1	35		No	No
	Fish and shellfish processing	A4.2	p	YES	No	No
	Marine plant harvesting	A4.3	p	YES	No	No
	Hunting, collecting and predator control (including birds)	A4.4	20		No	No
Cultivation of living resources	Marine aquaculture	A5.1	30		No	No
	Freshwater aquaculture	A5.2	30		No	No
	Agriculture	A5.3	45		No	No
	Forestry (silviculture)	A5.4	18		No	No
Transport	Transport infrastructures (including ports)	A6.1	28		No	No
	Transport – shipping	A6.2	50		YES	YES
	Transport – air	A6.3	15		No	YES
	Transport – land	A6.4	24		No	No
Urban and industrial uses	Urban uses	A7.1	6		No	No
	Industry and industrial uses	A7.2	22		No	YES
	Waste treatment and disposal infrastructure	A7.3	p	YES	No	No
Tourism and leisure	Tourism, sporting, recreational (infrastructure)	A8.1	35		No	No
	Tourism, sporting, recreational (activities)	A8.2	35		No	No
Security/defence	Military operations and infrastuctures	A9.1	28		YES	YES
Education and research	Research, survey and educational activities	A10.1	21		No	No

Figure 1. Composition of Economical Activities for Italy (details are consultable using the EIAT tool)

TYPE	ENVIRONMENTAL PRESSURE	CODE	OVERALL EPL				TRANSNOBUNDARY EXHOGENOUS EPL QUOTA (%)				LOCALLY GENERATED EPL				DATA GAPS*
Physical	Physical damage/disturbance and morphological alteration (substrate, sea-floor, coast, land, shoreline, including erosion/accretion)	P1.1	25	12			0%	0%			25	12			
	Extraction of sea-floor and land (soil and subsoil)	P1.2	10		4		0%		0%		10		4		
Hydrological	**Changes to hydrological conditions (e.g. wave action, currents, salinity, temperature, input/extraction of water)**	**P2.1**	3	6	3		0%	0%	0%		3	6	3		
Energy	Input of sound	P3.1	2				0%				2				
	Input of electromagnetic fields or light	P3.2	1				0%				1				
	Input of seismic waves	P3.3													YES
	Input of heat	P3.4	3	1			0%				3	1			YES
Biological	**Translocation of (native) species, introduction/spread of non-indigenous or genetically modified species**	**P4.1**	2	8			0%	0%			2	8			
	Introduction of microbial pathogens	**P4.2**	28	20			0%				28	20			YES
	Removal of species (target/non-target, selective extraction)	**P4.3**	25	20			0%				25	20			YES
	Disturbance, injury and death to species	**P4.4**	30	15			0%	0%			30	15			
	Cultivation/artificialisation of natural habitat	**P4.5**	42				0%				42				
Chemical, pollution, litter	Input of nutrients and organic matter (diffuse/point sources, atmospheric deposition)	P5.1	3				0%				3				
	Input of contaminants (synthetic, non-synthetic, radionuclides) – diffuse/point sources, atmospheric deposition, acute events	P5.2	10	4			15%	0%			8,5	4			
	Input of litter (solid waste matter, microsized litter)	P5.3	5	3			0%	0%			5	3			YES
	Input of CO2 and greenhouse gases	P5.4	25				0%				25				
			LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS	
			ICZM ZONES				ICZM ZONES				ICZM ZONES				

Figure 2. EP type present on the Italian side

2.3. Environmental Status Evaluation

The main information source for the present analysis is the ARPA Puglia reports (Arpa Puglia, 2022), listed in the Reference Section. Due to the lack of data with a deeper level of detail, in the following stage of the analysis, the Status indicators are not specialised over the corresponding involved EOs and CIs but only referring to the general status components "S". As shown in Figure 3, the classification of the SC alteration levels is split into the 4 ICZM zones.

STATUS COMPONENTS TABLE						
STATUS COMPONENTS			SAL			
S1	Biodiversity	EO1	25	20		
S2	Marine and coastal food webs	EO4, EO3	18	12		
S3	Sea-floor and coastal integrity	EO6	30	20	10	
S4	Coastal ecosystems and landscapes	EO8	35			
			LW	IN	SW	IS
			ICZM ZONES			

Figure 3. Status assessment map for Italy

2.4. Interactions

EA/EP Analysis

After completing the EA assessment phase and identifying the spectrum of EPs generated by each EA (Figure 4), a quali-quantitative score of the Pressure-Generation Capacity (PGC) was assigned to qualify the ability of a given EA to generate a specific EP.

Taking into consideration the EPs that are most relevant for the Italian area (P4.5, P4.4), from the analysis of GIS data and ARPA Reports (Arpa Puglia, 2022), it emerges that the EAs with a high capacity to generate the aforementioned EPs are:

Cultivation/artificialisation of natural habitat (P4.5): agriculture (A5.3), land take for urban, industrial and agricultural uses (A1.1), urban uses (A7.1). Due to the scarcity of data, evaluation was only possible for the LW zone.

Disturbance, injury and death of species (P4.4): tourism, sporting and recreational (activities) (A8.2), transport (land) (A6.4), tourism, sporting and recreational (infrastructure) (A8.1), infrastructure for coastal resilience/defence and flood protection (A1.3) for the LW zone; fish and shellfish harvesting (A4.1) and transport (shipping) (A6.2) for the IN zone.

ICZM ZONES / EP CODE / EPL → ; EA CODE / RLP → EA/EP MATRIX → TOTAL PER EA

CODE	RLP	P1.1 LW	P1.1 IN	P1.1 SW	P1.1 IS	P1.2 LW	P1.2 IN	P1.2 SW	P1.2 IS	P2.1 LW	P2.1 IN	P2.1 SW	P2.1 IS
EPL		25	12			10		4		3	6	3	
A1.1	42	6											
A1.2	p									1	6		
A1.3	p									1			
A1.4	10											3	
A1.5	p												
A2.1	28		4			10							
A2.2	15							4					
A2.3	p												
A2.4	p												
A3.1	12												
A3.2	24												
A3.3	27												
A4.1	35												
A4.2	p												
A4.3	p												
A4.4	20												
A5.1	30												
A5.2	30												
A5.3	45	5											
A5.4	18												
A6.1	28	3	2										
A6.2	50		3										
A6.3	15												
A6.4	24												
A7.1	6	8											
A7.2	22												
A7.3	p												
A8.1	35	5	3										
A8.2	35												
A9.1	28												
A10.1	21												

CODE	RLP	P3.1 LW	P3.1 IN	P3.1 SW	P3.1 IS	P3.2 LW	P3.2 IN	P3.2 SW	P3.2 IS	P3.3 LW	P3.3 IN	P3.3 SW	P3.3 IS	P3.4 LW	P3.4 IN	P3.4 SW	P3.4 IS
EPL		2				1								3	1		
A1.1	42																
A1.2	p																
A1.3	p																
A1.4	10																
A1.5	p																
A2.1	28																
A2.2	15																
A2.3	p																
A2.4	p																
A3.1	12																
A3.2	24																
A3.3	27																
A4.1	35																
A4.2	p																
A4.3	p																
A4.4	20																
A5.1	30																
A5.2	30																
A5.3	45													1			
A5.4	18																
A6.1	28																
A6.2	50														1		
A6.3	15																
A6.4	24																
A7.1	6													1			
A7.2	22	1												1			
A7.3	p																
A8.1	35																
A8.2	35	1				1											
A9.1	28																
A10.1	21																

CODE	RLP	P4.1 LW	P4.1 IN	P4.1 SW	P4.1 IS	P4.2 LW	P4.2 IN	P4.2 SW	P4.2 IS	P4.3 LW	P4.3 IN	P4.3 SW	P4.3 IS	P4.4 LW	P4.4 IN	P4.4 SW	P4.4 IS	P4.5 LW	P4.5 IN	P4.5 SW	P4.5 IS
EPL		2	8			28	20			25	20			30	15			42			
A1.1	42																	16			
A1.2	p																				
A1.3	p													2							
A1.4	10																				
A1.5	p																				
A2.1	28									5	2										
A2.2	15																				
A2.3	p																				
A2.4	p																				
A3.1	12																				
A3.2	24																				
A3.3	27																				
A4.1	35									8	7				10						
A4.2	p																				
A4.3	p																				
A4.4	20									8	6										
A5.1	30		3				9			4	5										
A5.2	30																				
A5.3	45					18												24			
A5.4	18																				
A6.1	28	2																			
A6.2	50		5			10	11								5						
A6.3	15																				
A6.4	24													8							
A7.1	6																	3			
A7.2	22																				
A7.3	p																				
A8.1	35													5							
A8.2	35													15							
A9.1	28																				
A10.1	21																				

CODE	RLP	P5.1 LW	P5.1 IN	P5.1 SW	P5.1 IS	P5.2 LW	P5.2 IN	P5.2 SW	P5.2 IS	P5.3 LW	P5.3 IN	P5.3 SW	P5.3 IS	P5.4 LW	P5.4 IN	P5.4 SW	P5.4 IS	TOTAL PER EA LW	TOTAL PER EA IN	TOTAL PER EA SW	TOTAL PER EA IS
EPL		3				9	4			5	3			25							
A1.1	42																	22			
A1.2	p																	1	6		
A1.3	p																	3			
A1.4	10																			3	
A1.5	p																				
A2.1	28																	15	6		
A2.2	15																			4	
A2.3	p																				
A2.4	p																				
A3.1	12																				
A3.2	24																				
A3.3	27													10				10			
A4.1	35										1							8	18		
A4.2	p																				
A4.3	p																				
A4.4	20																	8	6		
A5.1	30										1							4	18		
A5.2	30																				
A5.3	45					1								2				51			
A5.4	18																				
A6.1	28																	5	2		
A6.2	50						4				1			5				15	30		
A6.3	15																				
A6.4	24	1				1				1				5				16			
A7.1	6	1				2				2								17			
A7.2	22	1				3				2				2				10			
A7.3	p	1				1												2			
A8.1	35																	10	3		
A8.2	35																	17			
A9.1	28																				
A10.1	21																				

Figure 4. EA/EP analysis

EP/SC Analysis

The purpose of the EP/SC PIS Matrix is to evaluate how the effects of EPs in the area can be linked to the detected SC alteration levels. Each pressure can potentially impact on a spectrum of different status components, via different paths and with variable degrees of interaction. The correlations existing between each of the EPs and affected SCs are identified through the available data and information used by the expert for the quantification of the potential impacts.

In the EP/SC PIS matrix, possible causal links between the altered SCs and the detected EPs were examined, based on the use of the PIS (Pressure Impact Score) values to identify and evaluate all possible EP/SC interactions. PIS scores are assigned for each of the four ICZM zones. From the analysis of the data (Arpa Puglia, 2022) (MSP, 2022), it was possible to assign a PIS score in some cases, ranging from 0 to 50. In cases where the lack of data did not allow the direct identification of causal links, reference was made to the general list of potential impacts reported in the MEDPOL table (MEDPOL, 2019) and a nominal value P (plausible) was assigned in Figure 5.

S1 – Biodiversity

Considering the overall moderate level of alteration in the area – as documented in the ARPA Puglia report (Arpa Puglia, 2022) – the presence of different types of pressures – biological (P4) and chemical, pollution litter (P5) is highlighted as a potential interaction of moderate magnitude, in line with the MEDPOL table (MEDPOL, 2019).

S2 – Marine and Coastal Food Webs and Fish Stocks

From the analysis of the data (Arpa Puglia, 2022), a low level of overall alteration of the area is evident; however, due to the lack of data, it was not possible to identify which pressures are potential elements of interaction.

S3 – Seafloor and Coastal Integrity

The presence of pressures – biological (P4), physical (P1) and hydrological (P2) is highlighted as a potential interaction of moderate magnitude, in line with the MEDPOL table (MEDPOL, 2019).

S4 – Coastal Ecosystems, Landscapes, Seascape, Coastal Wetlands, Estuaries, Coastal Forests and Woods, and Dunes

The presence of pressures – physical (P1), biological (P4), hydrological (P2), and chemical, pollution and litter (P5) is highlighted as a potential interaction of moderate magnitude, in line with the MEDPOL table (MEDPOL, 2019).

EP/SC PIS MATRIX

TYPE	PRESSURE	CODE	EPL LW	EPL IN	EPL SW	EPL IS		S1 LW	S1 IN	S1 SW	S1 IS	S2 LW	S2 IN	S2 SW	S2 IS	S3 LW	S3 IN	S3 SW	S3 IS	S4 LW	S4 IN	S4 SW	S4 IS
								25	20			18	12			30	20	10		35			
Physical	Physical damage/disturbance and morphological alteration	P1.1	25	12			→	p	p							20	15			30			
	Extraction of sea-floor and land (soil and subsoil)	P1.2	10		4		→									p	p	p					
Hydrological	Changes to hydrological conditions	P2.1	3	6	3		→									10	15	15		10			
Energy	Input of sound	P3.1	2				→	p	p	p						p	p						
	Input of electromagnetic fields or light	P3.2	1				→																
	Input of seismic waves	P3.3					→	p	p	p													
	Input of heat	P3.4	3	1			→																
Biological	Translocation of (native) species, introduction/spread of non-indigenous or genetically modified species	P4.1	2	8			→	8	12	p		p	p										
	Introduction of microbial pathogens	P4.2	28	20			→									p	p						
	Removal of species (target/non-target, selective extraction)	P4.3	25	20			→	p	p	p		p	p			10	5	3					
	Disturbance, injury and death to species	P4.4	30	15			→	25	10			p	p			15	8	5		20			
	Cultivation/artificialisation of natural habitat	P4.5	42				→	35	10							28	23	15		14			
Chemical, pollution, litter	Input of nutrients and organic matter (diffuse/point sources, atmospheric deposition)	P5.1	3				→	p	p	p						p	p	p		p	p		
	Input of contaminants – diffuse/point sources, atmospheric deposition, acute events	P5.2	8,5	4			→	7	p	p						p	p	p		p	p		
	Input of litter (solid waste matter, microsized litter)	P5.3	5	3			→	p	p							p	p	p		10	p		
	Input of CO2 and greenhouse gases	P5.4	25				→	p	p	p													

Figure 5. EP/SC analysis

Prioritisation

By tracing back the EA→EP→SC flow of interactions, the effects of EAs and EPs can be synthesised, classified and prioritised in terms of their environmental relevance and their impact on SCs. It is subsequently possible to trace which pressures and EAs are more strongly linked to a given status component alteration, by relying on the previously used scores and matrices.

Prioritisation of EAs with Respect to EPs

EAs can be listed in terms of their relative EP generation capability, ranked by their aggregated EPL scores (detailed in the above EA/EP Matrix), as an indication of their overall pressure output level.

The analysis has allowed for the prioritisation of the LW, IN and SW zones (Figure 6). For the LW zone, the prioritisation scheme highlights activities with greater pressure-generation capacity, the EAs: agriculture (A5.3), land take for urban industrial and agricultural uses (A1.1), tourism, sporting and recreational (activities) (A8.2) and urban uses (A7.1). As for the IN zone, conversely, EA transport – shipping (A6.2) is an activity with a greater pressure-generation capacity. For the SW zone, two EAs with low EPL values were identified: utilisation of natural resources: extraction of oil and gas and related infrastructure (A2.2) and offshore structures (other than for oil/gas/renewables) (A1.4).

LW - EPL	EAs	IN - EPL	EAs	SW - EPL	EAs
51	A5.3	30	A6.2	4	A2.2
22	A1.1	18	A5.1	3	A1.4
17	A8.2	18	A4.1		
17	A7.1	6	A4.4		
16	A6.4	6	A2.1		
15	A6.2	6	A1.2		
15	A2.1				
10	A8.1				
10	A7.2				
10	A3.3				
8	A4.4				
8	A4.1				
5	A6.1				
4	A5.1				
3	A1.3				
2	A7.3				
1	A1.2				

Figure 6. Prioritisation of EAs with respect to EPs

Prioritisation of EAs with Respect to a Given EP

EAs are ranked based on their EA-specific EPL score for a given EP as presented in the EA/EP Matrix. Below are the pressures that it was possible to identify from the EA/EP Matrix, and that we have reported on and commented upon individually in detail, in order to provide a clearer representation of the results:

P1.1 – LW: 3 EAs have been identified. Urban uses (A7.1) is the EA that has the greatest influence and transport infrastructure (including ports) (A6.1) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P1.1 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A7.1	8
2	A1.1	6
3	A8.1	5
4	A5.3	5
5	A6.1	3

Figure 7.

P1.1 – IN: 2 EAs have been identified. Utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals (A2.1) is the EA that has the greatest influence and transport infrastructure (including ports) (A6.1) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P1.1 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A2.1	4
2	A8.1	3
3	A6.2	3
4	A6.1	2

Figure 8.

P1.2 – LW: only one EA was identified, utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals (A2.1).

Ranking of the EAs for their specific Environmental Pressure Level		
	P1.2 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A2.1	10

Figure 9.

P1.2 – SW: only one EA was identified, utilisation of natural resources: extraction of oil and gas and related infrastructure (A2.2).

Ranking of the EAs for their specific Environmental Pressure Level		
	P1.2 - SW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A2.2	4

Figure 10.

P2.1 – LW: 2 EAs have been identified with the same influence, infrastructure for coastal resilience/defence and flood protection (A1.3) and infrastructure related to coastal/watercourse morphology alteration (dams, canalisation, trenching, ports) (A1.2).

Ranking of the EAs for their specific Environmental Pressure Level		
	P2.1 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A1.3	1
2	A1.2	1

Figure 11.

P2.1 – IN: only one EA was identified, infrastructure related to coastal/watercourse morphology alteration (dams, canalisation, trenching and ports) (A1.2).

Ranking of the EAs for their specific Environmental Pressure Level		
	P2.1 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A1.2	6

Figure 12.

P2.1 – SW: only one EA was identified, offshore structures (other than for oil/gas/renewables) (A1.4).

Ranking of the EAs for their specific Environmental Pressure Level		
	P2.1 - SW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A1.4	3

Figure 13.

P3.1 – LW: 2 EAs were identified with the same influence, tourism, sporting and recreational (activities) (A8.2) and industry and industrial uses (A7.2).

Ranking of the EAs for their specific Environmental Pressure Level		
	P3.1 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A8.2	1
2	A7.2	1

Figure 14.

P3.2 – LW: only one EA was identified, tourism, sporting and recreational (activities) (A8.2).

Ranking of the EAs for their specific Environmental Pressure Level		
	P3.2 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A8.2	1

Figure 15.

P3.4 – LW: 3 EAs were identified with the same influence, industrial uses (A7.2), urban uses (A7.1) and agriculture (A5.3).

Ranking of the EAs for their specific Environmental Pressure Level		
	P3.4 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A7.2	1
2	A7.1	1
3	A5.3	1

Figure 16.

P3.4 – IN: only one EA was identified, transport – shipping (A6.2).

Ranking of the EAs for their specific Environmental Pressure Level		
	P3.4 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A6.2	1

Figure 17.

P4.1 – LW: only one EA was identified, transport infrastructure (including ports) (A6.1).

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.1 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A6.1	2

Figure 18.

P4.1 – IN: 2 EAs have been identified, transport – shipping (A6.2) and marine aquaculture (A5.1).

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.1 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A6.2	5
2	A5.1	3

Figure 19.

P4.2 – LW: 2 EAs have been identified. Agriculture (A5.3) is the EA that has the greatest influence and transport – shipping (A6.2) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.2 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A5.3	18
2	A6.2	10

Figure 20.

P4.2 – IN: 2 EAs have been identified. Transport – shipping (A6.2) is the EA that has the greatest influence and marine aquaculture (A5.1) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.2 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A6.2	11
2	A5.1	9

Figure 21.

P4.3 – LW: 4 EAs have been identified. Hunting, collecting and predator control (including birds) (A4.4) is the EA that has the greatest influence and marine aquaculture (5.1) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.3 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A4.4	8
2	A4.1	8
3	A2.1	5
4	A5.1	4

Figure 22.

P4.3 – IN: 4 EAs have been identified. Fish and shellfish harvesting (A4.1) is the EA that has the greatest influence and the utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals (A2.1) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.3 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A4.1	7
2	A4.4	6
3	A5.1	5
4	A2.1	2

Figure 23.

P4.4 – LW: 4 EAs have been identified. Tourism, sporting and recreational (activities) (A8.2) is the EA that has the greatest influence and infrastructure for coastal resilience/defence and flood protection (A1.3) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.4 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A8.2	15
2	A6.4	8
3	A8.1	5
4	A1.3	2

Figure 24.

P4.4 – IN: 2 EAs have been identified. Fish and shellfish harvesting (A4.1) is the EA that has the greatest influence and transport – shipping (A6.2) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.4 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A4.1	10
2	A6.2	5

Figure 25.

P4.5 – LW: 3 EAs have been identified. Agriculture (A5.3) is the EA that has the greatest influence and urban uses (A7.1) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.5 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A5.3	24
2	A1.1	16
3	A7.1	3

Figure 26.

P5.1 – LW: 4 EAs were identified with the same influence, waste treatment and disposal infrastructure (A7.3), industrial uses (A7.2), urban uses (A7.1) and transport – land (A6.4).

Ranking of the EAs for their specific Environmental Pressure Level		
	P5.1 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A7.3	1
2	A7.2	1
3	A7.1	1
4	A6.4	1

Figure 27.

P5.2 – LW: 5 EAs have been identified, waste treatment and disposal infrastructure (A7.3), industrial uses (A7.2), urban uses (A7.1), transport – land (A6.4) and agriculture (A5.3).

Ranking of the EAs for their specific Environmental Pressure Level		
	P5.2 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A7.2	3
2	A7.1	2
3	A7.3	1
4	A6.4	1

Figure 28.

P5.2 – IN: only one EA was identified, transport – shipping (A6.2).

Ranking of the EAs for their specific Environmental Pressure Level		
	P5.2 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A6.2	4

Figure 29.

P5.3 – LW: 3 EAs have been identified, industrial uses (A7.2), urban uses (A7.1) and transport – land (A6.4).

Ranking of the EAs for their specific Environmental Pressure Level		
	P5.3 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A7.2	2
2	A7.1	2
3	A6.4	1

Figure 30.

P5.3 – IN: 3 EAs were identified with the same influence, transport – shipping (A6.2), marine aquaculture (A5.1) and fish and shellfish harvesting (A4.1).

Ranking of the EAs for their specific Environmental Pressure Level		
	P5.3 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A6.2	1
2	A5.1	1
3	A4.1	1

Figure 31.

P5.4 – LW: 5 EAs have been identified. Energy transmission (including cables and pipelines) (A3.3) is the EA that has the greatest influence and agriculture (A5.3) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P5.4 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A3.3	10
2	A6.4	5
3	A6.2	5
4	A7.2	2
5	A5.3	2

Figure 32.

Prioritisation of Altered Status Components (SCs)

Altered SCs are prioritised based on their Status Alteration Level – SAL score, as presented in the SC Table (Figure 33).

From the data analysis, it is evident that for the LW zone, the most altered SC is Coastal ecosystems and landscapes (S4) and the least altered is Marine and coastal food webs and fish stocks (S2).

For the IN zone, there is no information regarding the alteration of Coastal ecosystems and landscapes (S4).

For the SW zone, due to the limited availability of data (Arpa Puglia, 2022), it was only possible to assign a value to Seafloor and coastal integrity (S3).

STATUS COMPONENTS PRIORITIZATION - LW		
S4		35
S3		30
S1		25
S2		18

STATUS COMPONENTS PRIORITIZATION - IN		
S3		20
S1		20
S2		12

STATUS COMPONENTS PRIORITIZATION - SW		
S3		10

STATUS COMPONENTS PRIORITIZATION - IS		

Figure 33. Status components prioritisation

Prioritisation of EPs with Respect to a Given SC

For any given SC, EPs can be ranked with respect to their PIS value (detailed in the above SC/EP Matrix), in terms of their relative impact (Figure 34).

Landward Zone

Coastal ecosystems and landscapes (S4): 7 EPs were identified. Physical damage/disturbance and morphological alteration (substrate, seafloor, coast, land and shoreline, including erosion/accretion) (P1.1) is the EP that has the greatest impact and the input of nutrients and organic matter (diffuse/point sources, atmospheric deposition) (P5.1) is the EP that has the least impact.

Seafloor and coastal integrity (S3): 11 EPs were identified. Cultivation/artificialisation of natural habitat (P4.5) is the EP that has the greatest impact and the input of sound (P3.1) is the EP that has the least impact.

(S1): 10 EPs were identified. Cultivation/artificialisation of natural habitat (P4.5) is the EP that has the greatest impact and the input of sound (P3.1) is the EP that has the least impact.

Marine and coastal food webs (S2): 3 EPs were identified. Disturbance, injury and death of species (P4.4) is the EP that has the greatest impact and the translocation of (native) species, introduction/spread of non-indigenous or genetically modified species (P4.1) is the EP that has the least impact.

Interface Zone

Seafloor and coastal integrity (S3): 8 EPs were identified. Cultivation/artificialisation of natural habitat (P4.5) is the EP that has the greatest impact and input of litter (solid waste matter, microsized litter) (P5.3) is the EP that has the least impact.

Biodiversity (S1): 7 EPs were identified. Removal of species (target/non-target, selective extraction) (P4.3) is the EP that has the greatest impact and (Input of litter (solid waste matter, microsized litter)) (P5.3) is the EP that has the least impact.

Marine and coastal food webs (S2): 3 EPs were identified. Removal of species (target/non-target, selective extraction) (P4.3) is the EP that has the greatest impact and the translocation of (native) species, introduction/spread of non-indigenous or genetically modified species (P4.1) is the EP that has the least impact.

Seaward Zone

Seafloor and coastal integrity (S3): 5 EPs were identified. Cultivation/artificialisation of natural habitat) (P4.5) is the EP that has the greatest impact and the removal of species (target/non-target, selective extraction) (P4.3) is the EP that has the least impact.

STATUS COMPONENTS PRIORITIZATION - LW			Prioritisation of EPs with respect to SC alteration															
S4		35	P1.1	P4.4	P4.5	P5.3	P2.1	P5.2	P5.1									
S3		30	P4.5	P4.2	P1.1	P4.4	P4.3	P2.1	P1.2	P5.2	P5.3	P5.1	P3.1					
S1		25	P4.5	P5.4	P4.4	P4.3	P1.1	P4.1	P5.2	P5.3	P5.1	P3.1						
S2		18	P4.4	P4.3	P4.1													

STATUS COMPONENTS PRIORITIZATION - IN			Prioritisation of EPs with respect to SC alteration															
S3		20	P4.5	P4.2	P2.1	P1.1	P4.4	P4.3	P5.2	P5.3								
S1		20	P4.3	P4.1	P1.1	P4.5	P4.4	P5.2	P5.3									
S2		12	P4.3	P4.4	P4.1													

STATUS COMPONENTS PRIORITIZATION - SW			Prioritisation of EPs with respect to SC alteration															
S3		10	P4.5	P2.1	P4.4	P1.2	P4.3											

STATUS COMPONENTS PRIORITIZATION - IS			Prioritisation of EPs with respect to SC alteration															

Figure 34. Prioritisation of EPs with respect to a given SC

Prioritisation of EAs with Respect to a Given SC

EAs can be ranked, given the spectrum of generated EPs, in terms of their relative impact on any given SC. This prioritisation is carried out on the basis of the PGC Matrix and PIS values, as detailed in the EIAT.

S1-LW: 16 EAs have been identified. Agriculture (A5.3) is the EA with the most significant impact, and infrastructure for coastal resilience/defence and flood protection (A1.3) is the EA with the least impact.

EA prioritisation with reference to SC alteration		
	S1-LW	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A5.3	28
2	A1.1	19
3	A7.1	15
4	A6.4	15
5	A8.2	14
6	A6.1	11
7	A3.3	11
8	A8.1	9
9	A7.2	8
10	A4.4	8
11	A4.1	8
12	A6.2	5
13	A2.1	5
14	A5.1	4
15	A7.3	2
16	A1.3	2

Figure 35.

S1-IN: 7 EAs have been identified. Transport – shipping (A6.2) is the EA with the most significant impact and transport infrastructure (including ports) (A6.1) is the EA with the least impact.

EA prioritisation with reference to SC alteration		
	S1-IN	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A6.2	18
2	A4.1	15
3	A5.1	11
4	A2.1	6
5	A4.4	6
6	A8.1	3
7	A6.1	2

Figure 36.

S2-LW: 9 EAs have been identified. Tourism, sporting and recreational (activities) (A8.2) is the EA with the most significant impact and infrastructure for coastal resilience/defence and flood protection (A1.3) is the EA with the least impact.

EA prioritisation with reference to SC alteration		
	S2-LW	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A8.2	15
2	A6.4	8
3	A4.4	8
4	A4.1	8
5	A8.1	5
6	A2.1	5
7	A5.1	4
8	A6.1	2
9	A1.3	2

Figure 37.

S2-IN: 5 EAs have been identified. Fish and shellfish harvesting (A4.1) is the EA with the most significant impact and the utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals) (A2.1) is the EA with the least impact.

EA prioritisation with reference to SC alteration		
	S2-IN	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A4.1	17
2	A6.2	10
3	A5.1	8
4	A4.4	6
5	A2.1	2

Figure 38.

S3-LW: 16 EAs have been identified. Agriculture (A5.3) is the EA with the most significant impact and marine aquaculture (A5.1) is the EA with the least impact.

EA prioritisation with reference to SC alteration		
	S3-LW	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A5.3	39
2	A1.1	15
3	A7.1	13
4	A2.1	12
5	A6.2	10
6	A8.2	9
7	A7.2	7
8	A6.4	7
9	A8.1	6
10	A1.3	5
11	A1.2	5
12	A6.1	4
13	A4.4	3
14	A4.1	3
15	A7.3	2
16	A5.1	2

Figure 39.

S3-IN: 8 EAs have been identified. Transport – shipping (A6.2) is the EA with the most significant impact and hunting, collecting and predator control (including birds) (A4.4) is the EA with the least impact.

EA prioritisation with reference to SC alteration		
	S3-IN	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A6.2	23
2	A1.2	15
3	A5.1	11
4	A4.1	8
5	A2.1	6
6	A8.1	3
7	A6.1	3
8	A4.4	2

Figure 40.

S3-SW: 2 EAs have been identified. Offshore structures (other than for oil/gas/renewables) (A1.4) is the EA with the most significant impact and the utilisation of natural resources: extraction of oil and gas and related infrastructure (A2.2) is the EA with the least impact.

EA prioritisation with reference to SC alteration		
	S3-SW	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A1.4	15
2	A2.2	4

Figure 41.

S4-LW: 11 EAs have been identified. Urban uses (A7.1) is the EA with the most significant impact and waste treatment and disposal infrastructure (A7.3) is the EA with the least impact.

EA prioritisation with reference to SC alteration		
	S4-LW	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A7.1	17
2	A5.3	14
3	A1.1	12
4	A6.4	10
5	A8.2	10
6	A8.1	8
7	A7.2	7
8	A6.1	5
9	A1.3	5
10	A1.2	5
11	A7.3	2

Figure 42.

S4-IN: 3 EAs have been identified. Transport – shipping (A6.2) is the EA with the most significant impact and fish and shellfish harvesting (A4.1) is the EA with the least impact.

EA prioritisation with reference to SC alteration		
	S4-IN	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A6.2	5
2	A5.1	1
3	A4.1	1

Figure 43.

3. Application to Albanian Coastal Areas

3.1. Economic Activities Evaluation

Similarly to what has been done for the Italian side, the analysis of Economic Activities (EA) is presented in Figure 44, including 10 main types (A1-A10) and the relative sub-categories. The scoring 1-50 is used to classify the relative presence of each activity.

The predominant EAs detected for the Albanian area are production of energy (A3) and tourism and leisure (A8). Furthermore, various information gaps were identified in the data (GIS Albania, s.d.) (GEF Adriatic Project, 5 September 2021) (GEF Adriatic Project, 25 November 2021) (Mapping of Environmental Issues Along the Albanian Coast, 2021). If the data identified the presence of a specific AE but was insufficiently precise to allow the clear classification of such element in the frame of the scoring system, the element was regarded as present and was identified as P (plausible).

3.2. Environmental Pressure Evaluation

The proposed classification table for Pressures is presented in Figure 45, similarly to the Italian side description, presented in part 2.2.

The results show that the most relevant EP types present in the Albanian side of the CAMP area were the input of CO_2 and greenhouse gases (P5.4), cultivation/artificialisation of natural habitat (P4.5), translocation of (native) species, introduction/spread of non-indigenous or genetically modified species (P4.1) and physical damage/disturbance and morphological alteration (substrate, seafloor, coast, land and shoreline, including erosion/accretion) (P1.1), with the highest scores associated with the landward zone (Mapping of Environmental Issues Along the Albanian Coast, 2021).

For a more comprehensive analysis, for the pressures for which it was not possible to find information, the column indicating a data gap was ticked and a value was assigned in line with that attributed to the anthropogenic activities that generate the specific pressure.

EA TABLE						
TYPE	ECONOMIC ACTIVITY	CODE	RLP	DATA GAPS*	TRANSBOUDARY POTENTIAL	
					The EA has an intrinsic transnational scope or has localized close to or beyond/across transnational borders?	The EA has the potential to generate EPs capable of diffusing, propagating, or acting at a transnational level?
Physical restructuring of rivers, coastline or seabed (water management)	Land take for urban industrial and agricultural uses	A1.1	15		No	No
	Infrastructure related to coastal/watercourse morphology alteration (dams, canalisatition, trenching, ports)	A1.2	5		No	YES
	Infrastructure for coastal resilience/defence and flood protection	A1.3	p	YES	No	No
	Offshore structures (other than for oil/gas/renewables)	A1.4	p	YES	YES	YES
	Utilization of natural resources: dredging and depositing (coastal and maritime areas)	A1.5	p	YES	No	No
Extraction of non-living resources	Utilization of natural resources: extraction/mining of sand, gravel, rocks, minerals	A2.1	22		No	No
	Utilization of natural resources: extraction of oil and gas and relative infrastructures	A2.2	20		YES	YES
	Utilization of natural resources: desalination plants	A2.3	p	YES	No	No
	Utilization of natural resources: water extraction	A2.4	p	YES	No	No
Production of energy	Energy infrastructures: renewables	A3.1	24		YES	YES
	Energy infrastructures: non-renewables	A3.2	26		No	No
	Energy transmission (including cables and pipelines)	A3.3	17		No	No
Extraction of living resources	Fish and shellfish harvesting	A4.1	18		No	No
	Fish and shellfish processing	A4.2	p	YES	No	No
	Marine plant harvesting	A4.3	p	YES	No	No
	Hunting, collecting and predator control (including birds)	A4.4	p	YES	No	No
Cultivation of living resources	Marine aquaculture	A5.1	25		No	No
	Freshwater aquaculture	A5.2	p	YES	No	No
	Agriculture	A5.3	15		No	No
	Forestry (silviculture)	A5.4	18		No	No
Transport	Transport infrastructures (including ports)	A6.1	6		No	No
	Transport – shipping	A6.2	20		YES	YES
	Transport – air	A6.3	5		No	YES
	Transport – land	A6.4	15		No	No
Urban and industrial uses	Urban uses	A7.1	12		No	No
	Industry and industrial uses	A7.2	10		No	YES
	Waste treatment and disposal infrastructure	A7.3	p	YES	No	No
Tourism and leisure	Tourism, sporting, recreational (infrastructure)	A8.1	25		No	No
	Tourism, sporting, recreational (activities)	A8.2	25		No	No
Security/defence	Military operations and infrastuctures	A9.1	p	YES	YES	YES
Education and research	Research, survey and educational activities	A10.1	p	YES	No	No

Figure 44. Composition of Economical Activities for Albania

EP TABLE															
TYPE	ENVIRONMENTAL PRESSURE	CODE	OVERALL EPL				TRANSNOBUNDARY EXHOGENOUS EPL QUOTA (%)				LOCALLY GENERATED EPL				DATA GAPS*
Physical	Physical damage/disturbance and morphological alteration (substrate, sea-floor, coast, land, shoreline, including erosion/accretion)	P1.1	18	7			0%	0%			18	7			
	Extraction of sea-floor and land (soil and subsoil)	P1.2	10	10							10	10			YES
Hydrological	Changes to hydrological conditions (e.g. wave action, currents, salinity, temperature, input/extraction of water)	P2.1	8	4			0%	0%			8	4			
Energy	Input of sound	P3.1	3				0%				3				
	Input of electromagnetic fields or light	P3.2	2				0%				2				YES
	Input of seismic waves	P3.3					0%								YES
	Input of heat	P3.4	3				0%				3				YES
Biological	Translocation of (native) species, introduction/spread of non-indigenous or genetically modified species	P4.1	18	15			0%				18	15			
	Introduction of microbial pathogens	P4.2	15	10			0%				15	10			
	Removal of species (target/non-target, selective extraction)	P4.3	10	15			0%				10	15			YES
	Disturbance, injury and death to species	P4.4	9	4			0%	0%			9	4			
	Cultivation/artificialisation of natural habitat	P4.5	20				0%				20				
Chemical, pollution, litter	Input of nutrients and organic matter (diffuse/point sources, atmospheric deposition)	P5.1	4				0%				4				
	Input of contaminants (synthetic, non-synthetic, radionuclides) – diffuse/point sources, atmospheric deposition, acute events	P5.2	15	6			0%				15	6			
	Input of litter (solid waste matter, microsized litter)	P5.3	13	8			0%				13	8			
	Input of CO2 and greenhouse gases	P5.4	20				0%				20				
			LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS	
			ICZM ZONES				ICZM ZONES				ICZM ZONES				

Figure 45. EP type present on the Albanian side

3.3. Environmental Status Evaluation

The main information source for the present analysis is the GEF Adriatic Project reports "Status of the marine environment in Albania" (GEF Adriatic Project, 5 September 2021), "Towards an Integrated Marine Good Environmental Status (GES) Assessment for Albania: Assessment of the Marine Environment and the Sustainability of Ecosystem Values" (GEF Adriatic Project, 25 November 2021) and "Mapping of Environmental Issues Along the Albanian Coast" (Mapping of Environmental Issues Along the Albanian Coast, 2021), listed in the Reference Section. Due to the lack of data with a deeper level of detail, in the following stage of the analysis, the Status indicators are not specialised over the corresponding involved EOs and CIs but only referring to the general status components "S". As shown in Figure 48, the classification of the SC alteration levels is split into the 4 ICZM zones.

STATUS COMPONENTS TABLE						
STATUS COMPONENTS			SAL			
S1	Biodiversity	EO1	10	8		
S2	Marine and coastal food webs	EO4, EO3	15	12		
S3	Sea-floor and coastal integrity	EO6	20	15		
S4	Coastal ecosystems and landscapes	EO8	8			
			LW	IN	SW	IS
			ICZM ZONES			

Figure 46. Status assessment map for Albania

3.4. Interactions

EA/EP Analysis

As per the Italian side, after completing the EA evaluation phase and identifying the spectrum of EPs generated by each EA, a quali-quantitative score of the pressure-generation capacity (PGC) was assigned to qualify the ability of a given EA to generate a specific EP.

Taking into consideration the EPs that are most relevant for the Albanian area (P5.4, P4.5, P4.1, P1.1), from the analysis of available GIS data (GIS Albania, s.d.) and GEF Adriatic project reports (GEF Adriatic Project, 5 September 2021) (GEF Adriatic Project, 25 November 2021), it emerges that the EAs with a high capacity to generate the aforementioned EPs are:

Input of CO_2 and greenhouse gases (P5.4): energy infrastructure: renewables (A3.1), energy infrastructure: non-renewables (A3.2), agriculture (A5.3), forestry (A5.4), land take for urban industrial and agricultural uses (A1.1), urban uses (A7.1), industry and industrial uses (A7.2), waste treatment and disposal infrastructure (A7.3). Due to the scarcity of data, the evaluation was only possible for the LW zone.

Cultivation/artificialisation of natural habitat (P4.5): urban uses (A7.1), industry and industrial uses (A7.2), agriculture (A5.3), forestry (A5.4), marine aquaculture (A5.1), land take for urban industrial and agricultural uses (A1.1). Due to the scarcity of data, the evaluation was only possible for the LW zone.

Translocation of (native) species, introduction/spread of non-indigenous or genetically modified species (P4.1): transport infrastructure (including ports) (A6.1), transport – shipping (A6.2), marine aquaculture (A5.1), fish and shellfish harvesting (A4.1). Due to the scarcity of data, the evaluation was only possible for the LW and IN zones.

Physical damage/disturbance and morphological alteration (substrate, seafloor, coast, land and shoreline, including erosion/accretion) (P1.1): tourism, sporting and recreational (infrastructure) (A8.1), tourism, sporting and recreational (activities) (A8.2), urban uses (A7.1), industry and industrial uses (A7.2), land take for urban industrial and agricultural uses (A1.1), infrastructure related to coastal/watercourse morphology alteration (dams, canalisatition, trenching and ports) (A1.2), (Transport infrastructure (including ports) (A6.1). Due to the scarcity of data, the evaluation was only possible for the LW and IN zones.

ICZM ZONES		LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS
EP CODE		P1.1				P1.2				P2.1				P3.1			
EPL		18	7			10	10			8	4			3			
EA CODE	RLP																
A1.1		2															
A1.2	5	1															
A1.3	p																
A1.4	p																
A1.5	p																
A2.1	22	3	4			4	3			2	2						
A2.2	20					3	3										
A2.3	p																
A2.4	p					3	4										
A3.1	24																
A3.2	26																
A3.3	17																
A4.1	18																
A4.2	p																
A4.3	p																
A4.4	p																
A5.1	25																
A5.2	p																
A5.3	15									2							
A5.4	18																
A6.1	6	1															
A6.2	20																
A6.3	5																
A6.4	15																
A7.1	12	4								2	1			1			
A7.2	10	2	1							2	1						
A7.3	p																
A8.1	25	4	2											1			
A8.2	25	2												1			
A9.1	p																
A10.1	p																

ICZM ZONES		LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS
EP CODE		P3.2				P3.3				P3.4				P4.1			
EPL		2								3				18	15		
EA CODE	RLP																
A1.1																	
A1.2	5																
A1.3	p																
A1.4	p																
A1.5	p																
A2.1	22																
A2.2	20																
A2.3	p																
A2.4	p																
A3.1	24																
A3.2	26																
A3.3	17																
A4.1	18													3	4		
A4.2	p																
A4.3	p																
A4.4	p																
A5.1	25													8	5		
A5.2	p																
A5.3	15																
A5.4	18																
A6.1	6													8	2		
A6.2	20														4		
A6.3	5																
A6.4	15																
A7.1	12	1								1							
A7.2	10									1							
A7.3	p																
A8.1	25																
A8.2	25									1							
A9.1	p																
A10.1	p																

ICZM ZONES		LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS
EP CODE		P4.2				P4.3				P4.4				P4.5			
EPL		15	10			10	15			9	4			20			
EA CODE	RLP																
A1.1														4			
A1.2	5																
A1.3	p																
A1.4	p																
A1.5	p																
A2.1	22					2	4			3	1						
A2.2	20					1	2			2	1						
A2.3	p																
A2.4	p																
A3.1	24																
A3.2	26																
A3.3	17																
A4.1	18					2	3				1						
A4.2	p																
A4.3	p																
A4.4	p					2	4										
A5.1	25		6			12	8							2			
A5.2	p																
A5.3	15	9												3			
A5.4	18													1			
A6.1	6																
A6.2	20	6	4								1						
A6.3	5																
A6.4	15																
A7.1	12									2				6			
A7.2	10									1				4			
A7.3	p									1							
A8.1	25																
A8.2	25									1							
A9.1	p																
A10.1	p																

ICZM ZONES		LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS	TOTAL PER EA LW	IN	SW	IS
EP CODE		P5.1				P5.2				P5.3				P5.4							
EPL		4				15	6			13	8			20							
EA CODE	RLP																				
A1.1														2				8			
A1.2	5																	1			
A1.3	p																				
A1.4	p																				
A1.5	p																				
A2.1	22																	14	14		
A2.2	20													3				9	6		
A2.3	p																				
A2.4	p																	3	4		
A3.1	24					3								5				8			
A3.2	26																				
A3.3	17													10				10			
A4.1	18																	5	8		
A4.2	p																				
A4.3	p																				
A4.4	p																	2	4		
A5.1	25									2	1							24	20		
A5.2	p																				
A5.3	15					5								2				21			
A5.4	18					3								1				5			
A6.1	6									1	1							10	3		
A6.2	20																	6	9		
A6.3	5																				
A6.4	15	1																1			
A7.1	12	1								4	3			1				23	4		
A7.2	10	1				3				2	1			1				17	3		
A7.3	p	1				1				4	2							7	2		
A8.1	25																	5	2		
A8.2	25																	5			
A9.1	p																				
A10.1	p																				

EA/EP MATRIX

Figure 47. EA/EP analysis

EP/SC Analysis

The purpose of the EP/SC PIS Matrix is to evaluate how the effects of EPs in the area can be linked to the detected SC alteration levels. Each pressure can potentially impact on a spectrum of different status components, via different paths and with variable degrees of interaction. The correlations existing between each of the EPs and affected SCs identified during Phase 1 are identified through expert judgement as potential impacts.

In the EP/SC – PIS Matrix, potential causal links between altered SCs and detected EPs were examined, based on the use of the PIS (Pressure Impact Score) values to identify and assess all possible EP/SC interactions. PIS scores are assigned for each of the four ICZM zones. From the analysis of the data (GEF Adriatic Project reports "Status of the marine environment in Albania" (GEF Adriatic Project, 5 September 2021), "Towards an Integrated Marine Good Environmental Status (GES): Assessment for Albania Assessment of the Marine Environment and the Sustainability of Ecosystem Values" (GEF Adriatic Project, 25 November 2021) and "Mapping of Environmental Issues Along the Albanian Coast" (Mapping of Environmental Issues Along the Albanian Coast, 2021)), it was possible to assign a PIS score in some cases, ranging from 0 to 50. In cases where data scarcity did not allow the direct identification of causal links, reference was made to the general list of potential impacts reported in the MEDPOL table (MEDPOL, 2019) and a nominal value P (plausible) was assigned.

S1 – Biodiversity

Considering the overall low level of alteration in the area, the presence of biological (P4) and chemical, pollution and litter (P5) pressures is highlighted as a potential interaction of moderate magnitude, in line with the MEDPOL table (MEDPOL, 2019).

S2 – Marine and Coastal Food Webs and Fish Stocks

Considering the overall low level of alteration in the area, the presence of biological (P4) pressures is highlighted as a potential interaction of moderate magnitude, in line with the MEDPOL table (MEDPOL, 2019).

S3 – Seafloor and Coastal Integrity

Considering the overall low level of alteration in the area, the presence of biological (P4) pressures is highlighted as a potential interaction of moderate magnitude, in line with the MEDPOL table (MEDPOL, 2019).

S4 – Coastal Ecosystems, Landscapes, Seascape, Coastal Wetlands, Estuaries, Coastal Forests and Woods, and Dunes

Considering the overall low level of alteration in the area, the presence of physical (P1), biological (P4) and hydrological (P2) pressures is highlighted as a potential interaction of moderate magnitude, in line with the MEDPOL table (MEDPOL, 2019).

EP/SC PIS MATRIX

TYPE	PRESSURE	CODE	EPL					S1				S2				S3				S4			
			LW	IN	SW	IS		LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS	LW	IN	SW	IS
								10	8			15	12			20	15			8			
								↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Physical	Physical damage/disturbance and morphological alteration	P1.1	18	7			→	p	p							p				30			
	Extraction of sea-floor and land (soil and subsoil)	P1.2	10	10			→									p	p	p					
Hydrological	Changes to hydrological conditions	P2.1	8	4			→									p	p			25			
Energy	Input of sound	P3.1	3				→	p	p	p						p	p						
	Input of electromagnetic fields or light	P3.2	2				→																
	Input of seismic waves	P3.3					→	p	p	p													
	Input of heat	P3.4	3				→																
Biological	Translocation of (native) species, introduction/spread of non-indigenous or genetically modified species	P4.1	18	15			→	15	p	p		p	p										
	Introduction of microbial pathogens	P4.2	15	10			→									15	12						
	Removal of species (target/non-target, selective extraction)	P4.3	10	15			→	28	p	p		10	10			15	15			30			
	Disturbance, injury and death to species	P4.4	9	4			→	30	p			p	p			p	p			30			
	Cultivation/artificialisation of natural habitat	P4.5	20				→	30	p							p	p			23			
Chemical, pollution, litter	Input of nutrients and organic matter (diffuse/point sources, atmospheric deposition)	P5.1	4				→	p	p	p						p	p	p		p	p		
	Input of contaminants – diffuse/point sources, atmospheric deposition, acute events	P5.2	15	6			→	10	p	p						p	p	p		p	p		
	Input of litter (solid waste matter, microsized litter)	P5.3	13	8			→	12	p							p	p	p		p	p		
	Input of CO2 and greenhouse gases	P5.4	20				→	p	p	p													

Figure 48. EP/SC analysis

Prioritisation

By tracing back the EA→EP→SC flow of interactions, the effects of EAs and EPs can be synthesised, classified and prioritised in terms of their environmental relevance and their impact on SCs. It is subsequently possible to trace which pressures and EAs are more strongly linked to a given status component alteration, by relying on the previously used scores and matrices.

The following prioritisation schemes can be employed.

Prioritisation of EAs with Respect to EPs

EAs can be listed in terms of their relative EP generation capability, ranked by their aggregated EPL scores (detailed in the above EA/EP Matrix), as an indication of their overall pressure output level.

The analysis has only allowed for the prioritisation of the LW and IN zones. For the LW zone, the prioritisation scheme highlights activities with the greatest capacity to generate pressure, the EAs: marine aquaculture (A5.1), urban uses (A7.1) and industrial uses (A7.2). For the IN zone, the activity marine aquaculture (A5.1) is mainly detected as an EA generator of EP.

LW - EPL	EAs	IN - EPL	EAs
24	A5.1	20	A5.1
23	A7.1	14	A2.1
21	A5.3	9	A6.2
17	A7.2	8	A4.1
14	A2.1	6	A2.2
10	A6.1	4	A7.1
10	A3.3	4	A4.4
9	A2.2	4	A2.4
8	A3.1	3	A7.2
8	A1.1	3	A6.1
7	A7.3	2	A8.1
6	A6.2		
5	A8.2		
5	A8.1		
5	A5.4		
5	A4.1		
3	A2.4		
2	A4.4		
1	A6.4		
1	A1.2		

Figure 49. Prioritisation of EAs with respect to EPs

Prioritisation of EAs with Respect to a Given EP

EAs are ranked on the basis of their EA-specific EPL score for a given EP as presented in the EA/EP Matrix.

Below are the pressures for which connections with specific EAs have been identified from the data analysis, detailed as per Italian side.

P1.1 – LW: 7 EAs have been identified. Urban uses (A7.1) and tourism, sporting and recreational (infrastructure) (A8.1) are the EAs that have the greatest influence, and transport infrastructure (including ports) (A6.1) and infrastructure related to coastal/watercourse morphology alteration (dams, canalisatition, trenching and ports) (A1.2) are the EAs that have the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P1.1 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A8.1	4
2	A7.1	4
3	A2.1	3
4	A8.2	2
5	A7.2	2
6	A1.1	2
7	A6.1	1
8	A1.2	1

Figure 50.

P1.1 – IN: 2 EAs have been identified. Utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals (A2.1) is the EA that has the greatest influence, and industrial uses (A7.2) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P1.1 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A2.1	4
2	A8.1	2
3	A7.2	1

Figure 51.

P1.2 – LW: 3 EAs have been identified. Utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals (A2.1) is the EA that has the greatest influence, and the utilisation of natural resources: extraction of oil and gas and related infrastructure (A2.2) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P1.2 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A2.1	4
2	A2.4	3
3	A2.2	3

Figure 52.

P1.2 – IN: 3 EAs have been identified. Utilisation of natural resources: water extraction (A2.4) is the EA that has the greatest influence, and the utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals (A2.1) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P1.2 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A2.4	4
2	A2.2	3
3	A2.1	3

Figure 53.

P2.1 – LW: 4 EAs have been identified with the same influence, Industrial uses (A7.2), urban uses (A7.1), agriculture (A5.3) and the utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals (A2.1).

Ranking of the EAs for their specific Environmental Pressure Level		
	P2.1 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A7.2	2
2	A7.1	2
3	A5.3	2
4	A2.1	2

Figure 54.

P2.1 – IN: 3 EAs have been identified. Utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals (A2.1) is the EA that has the greatest influence, and industrial uses (A7.2) and urban uses (A7.1) have the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P2.1 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A2.1	2
2	A7.2	1
3	A7.1	1

Figure 55.

P3.1 – LW: 3 EAs have been identified with the same influence, Tourism, sporting and recreational (activities) (A8.2), tourism, sporting and recreational (infrastructure) (A8.1) and urban uses (A7.1).

Ranking of the EAs for their specific Environmental Pressure Level		
	P3.1 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A8.2	1
2	A8.1	1
3	A7.1	1

Figure 56.

P3.2 – LW: only one EA has been identified, Urban uses (A7.1).

Ranking of the EAs for their specific Environmental Pressure Level		
	P3.2 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A7.1	1

Figure 57.

P3.4 – LW: 3 EAs have been identified with the same influence, tourism, sporting and recreational (activities) (A8.2), industrial uses (A7.2) and urban uses (A7.1).

Ranking of the EAs for their specific Environmental Pressure Level		
	P3.4 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A8.2	1
2	A7.2	1
3	A7.1	1

Figure 58.

P4.1 – LW: 3 EAs have been identified. Transport infrastructure (including ports) (A6.1) and marine aquaculture (A5.1) are the EAs that have the greatest influence, and fish and shellfish harvesting (A4.1) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.1 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A6.1	8
2	A5.1	8
3	A4.1	3

Figure 59.

P4.1 – IN: 4 EAs have been identified. Marine aquaculture (A5.1) is the EA that has the greatest influence, and transport infrastructure (including ports) (A6.1) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.1 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A5.1	5
2	A6.2	4
3	A4.1	4
4	A6.1	2

Figure 60.

P4.2 – LW: 2 EAs have been identified. Agriculture (A5.3) is the EA that has the greatest influence, and transport – shipping (A6.2) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.2 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A5.3	9
2	A6.2	6

Figure 61.

P4.2 – IN: 2 EAs have been identified. Marine aquaculture (A5.1) is the EA that has the greatest influence, and transport – shipping (A6.2) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.2 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A5.1	6
2	A6.2	4

Figure 62.

P4.3 – LW: 5 EAs have been identified. Marine aquaculture (A5.1) is the EA that has the greatest influence, and the utilisation of natural resources: extraction of oil and gas and related infrastructure (A2.2) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.3 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A5.1	12
2	A4.4	2
3	A4.1	2
4	A2.1	2
5	A2.2	1

Figure 63.

P4.3 – IN: 5 EAs have been identified. Marine aquaculture (A5.1) is the EA that has the greatest influence, and the utilisation of natural resources: extraction of oil and gas and related infrastructure (A2.2) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.3 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A5.1	8
2	A4.4	4
3	A2.1	4
4	A4.1	3
5	A2.2	2

Figure 64.

P4.4 – LW: 6 EAs have been identified. Utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals (A2.1) is the EA that has the greatest influence, and industrial uses (A7.2) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.4 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A2.1	3
2	A7.1	2
3	A2.2	2
4	A8.2	1
5	A7.3	1
6	A7.2	1

Figure 65.

P4.4 – IN: 4 EAs have been identified. Transport – shipping (A6.2) is the EA that has the greatest influence, and the utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals (A2.1) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.4 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A6.2	1
2	A4.1	1
3	A2.2	1
4	A2.1	1

Figure 66.

P4.5 – LW: 6 EAs have been identified. Urban uses (A7.1) is the EA that has the greatest influence, and forestry (silviculture) (A5.4) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P4.5 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A7.1	6
2	A7.2	4
3	A1.1	4
4	A5.3	3
5	A5.1	2
6	A5.4	1

Figure 67.

P5.1 – LW: 4 EAs have been identified with the same influence, Waste treatment and disposal infrastructure (A7.3), industrial uses (A7.2) and transport – land (A6.4).

Ranking of the EAs for their specific Environmental Pressure Level		
	P5.1 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A7.3	1
2	A7.2	1
3	A7.1	1
4	A6.4	1

Figure 68.

P5.2 – LW: 5 EAs have been identified. Agriculture (A5.3) is the EA that has the greatest influence, and waste treatment and disposal infrastructure (A7.3) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P5.2 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A5.3	5
2	A7.2	3
3	A5.4	3
4	A3.1	3
5	A7.3	1

Figure 69.

P5.3 – LW: 5 EAs have been identified. Urban uses (A7.1) and waste treatment and disposal infrastructure (A7.3) are the EAs that have the greatest influence, and transport infrastructure (including ports) (A6.1) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P5.3 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A7.3	4
2	A7.1	4
3	A7.2	2
4	A5.1	2
5	A6.1	1

Figure 70.

P5.3 – IN: 5 EAs have been identified. Urban uses (A7.1) is the EA that has the greatest influence, and marine aquaculture (A5.1) and transport infrastructure (including ports) (A6.1) are the EAs that have the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P5.3 - IN	← EP (select from list)
ranking	EAs ranking	Related Score
1	A7.1	3
2	A7.3	2
3	A7.2	1
4	A6.1	1
5	A5.1	1

Figure 71.

P5.4 – LW: 8 EAs have been identified. Energy transmission (including cables and pipelines) (A3.3) is the EA that has the greatest influence, and forestry (silviculture) (A5.4) is the EA that has the least influence.

Ranking of the EAs for their specific Environmental Pressure Level		
	P5.4 - LW	← EP (select from list)
ranking	EAs ranking	Related Score
1	A3.3	10
2	A3.1	5
3	A2.2	3
4	A5.3	2
5	A1.1	2
6	A7.2	1
7	A7.1	1
8	A5.4	1

Figure 72.

Prioritisation of Altered Status Components (SCs)

As per the Italian side, altered SCs are prioritised on the basis of their Status Alteration Level – SAL score, as presented in the SC Table (Figure 73).

Due to the limited availability of data (GIS Albania, s.d.) (Mapping of Environmental Issues Along the Albanian Coast, 2021) (GEF Adriatic Project, 5 September 2021) (GEF Adriatic Project, 25 November 2021), it was only possible to assign a value for the LW and IN zones. From the data analysis, it is evident that for the LW zone, the most altered SC is Seafloor and coastal integrity (S3) and the least altered is Coastal ecosystems and landscapes (S4). For the IN zone, the most altered SC is Seafloor and coastal integrity (S3) and the least altered is Biodiversity (S1). However, there is no information regarding the alteration of Coastal ecosystems and landscapes (S4).

STATUS COMPONENTS PRIORITIZATION - LW		
S3		20
S2		15
S1		10
S4		8

STATUS COMPONENTS PRIORITIZATION - IN		
S3		15
S2		12
S1		8

STATUS COMPONENTS PRIORITIZATION - SW		

STATUS COMPONENTS PRIORITIZATION - IS		

Figure 73. Status components prioritisation

Prioritisation of EPs with Respect to a Given SC

For any given SC, EPs can be ranked with respect to their PIS value (detailed in the above SC/EP Matrix), in terms of their relative impact.

Landward Zone

Seafloor and coastal integrity (S3): 11 EPs have been identified. Cultivation/artificialisation of natural habitat (P4.5) is the EP that has the greatest influence, and the input of sound (P3.1) is the EP that has the least influence.

Marine and coastal food webs (S2): 3 EPs have been identified. Translocation of (native) species, introduction/spread of non-indigenous or genetically modified species (P4.1) is the EP that has the greatest influence, and Disturbance, injury and death of species (P4.4) is the EP that has the least influence.

Biodiversity (S1): 10 EPs have been identified. Cultivation/artificialisation of natural habitat (P4.5) is the EP that has the greatest influence, and the input of sound (P3.1) is the EP that has the least influence.

Coastal ecosystems and landscapes (S4): 8 EPs have been identified. Disturbance, injury and death of species (P4.4) is the EP that has the greatest influence, and the input of nutrients and organic matter (diffuse/point sources, atmospheric deposition (P5.1) is the EP that has the least influence.

Interface Zone

Seafloor and coastal integrity (S3): 7 EPs have been identified. Removal of species (target/non-target, selective extraction (P4.3) is the EP that has the greatest influence and changes to hydrological conditions (e.g. wave action, currents, salinity, temperature and the input/extraction of water) (P2.1) is the EP that has the least influence.

Marine and coastal food webs (S2): 3 EPs have been identified. Removal of species (target/non-target, selective extraction (P4.3) is the EP that has the greatest influence and Disturbance, injury and death of species (P4.4) is the EP that has the least influence.

Biodiversity (S1): 6 EPs have been identified. Removal of species (target/non-target, selective extraction (P4.3) is the EP that has the greatest influence and Disturbance, injury and death of species (P4.4) is the EP that has the least influence.

STATUS COMPONENTS PRIORITIZATION - LW			Prioritisation of EPs with respect to SC alteration															
S3		20	P4.5	P1.1	P5.2	P4.2	P5.3	P4.3	P1.2	P4.4	P2.1	P5.1	P3.1					
S2		15	P4.1	P4.3	P4.4													
S1		10	P4.5	P4.4	P4.3	P5.4	P1.1	P4.1	P5.3	P5.2	P5.1	P3.1						
S4		8	P4.4	P4.3	P1.1	P2.1	P4.5	P5.2	P5.3	P5.1								
STATUS COMPONENTS PRIORITIZATION - IN			Prioritisation of EPs with respect to SC alteration															
S3		15	P4.3	P4.2	P1.2	P5.3	P5.2	P4.4	P2.1									
S2		12	P4.3	P4.1	P4.4													
S1		8	P4.3	P4.1	P5.3	P1.1	P5.2	P4.4										
STATUS COMPONENTS PRIORITIZATION - SW			Prioritisation of EPs with respect to SC alteration															
STATUS COMPONENTS PRIORITIZATION - IS			Prioritisation of EPs with respect to SC alteration															

Figure 74. Prioritisation of EPs with respect to a given SC

Prioritisation of EAs with Respect to a Given SC

EAs can be ranked, given the spectrum of generated EPs, in terms of their relative impact on any given SC. This prioritisation is carried out on the basis of the PGC Matrix and PIS values, as detailed in the EIAT.

S1-LW: 18 EAs have been identified. Urban uses (A7.1) is the EA that has the greatest influence and infrastructure related to coastal/watercourse morphology alteration (dams, canalisation, trenching and ports) (A1.2) is the EA that has the least influence.

EA prioritisation with reference to SC alteration		
	S1-LW	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A7.1	25
2	A7.2	19
3	A5.1	18
4	A2.1	18
5	A2.2	13
6	A1.1	11
7	A5.3	10
8	A7.3	9
9	A6.1	8
10	A4.1	8
11	A3.1	7
12	A8.2	5
13	A8.1	5
14	A4.4	5
15	A5.4	4
16	A3.2	4
17	A6.4	1
18	A1.2	1

Figure 75.

S1-IN: 11 EAs have been identified. Marine aquaculture (A5.1) is the EA that has the greatest influence and waste treatment and disposal infrastructure (A7.3) is the EA that has the least influence.

EA prioritisation with reference to SC alteration		
	S1-IN	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A5.1	9
2	A2.1	9
3	A4.1	8
4	A6.2	5
5	A4.4	4
6	A6.1	3
7	A7.1	3
8	A2.2	3
9	A7.2	2
10	A8.1	2
11	A7.3	2

Figure 76.

S2-LW: 10 EAs have been identified. Marine aquaculture (A5.1) is the EA that has the greatest influence and industrial uses (A7.2) is the EA that has the least influence.

EA prioritisation with reference to SC alteration		
	S2-LW	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A5.1	10
2	A6.1	8
3	A4.1	5
4	A2.1	5
5	A2.2	3
6	A7.1	2
7	A4.4	2
8	A8.2	1
9	A7.3	1
10	A7.2	1

Figure 77.

S2-IN: 7 EAs have been identified. Fish and shellfish harvesting (A4.1) is the EA that has the greatest influence and transport infrastructure (including ports) (A6.1) is the EA that has the least influence.

EA prioritisation with reference to SC alteration		
	S2-IN	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A4.1	8
2	A5.1	8
3	A6.2	5
4	A2.1	5
5	A4.4	4
6	A2.2	3
7	A6.1	2

Figure 78.

S3-LW: 19 EAs have been identified. Urban uses (A7.1) is the EA that has the greatest influence, and infrastructure related to coastal/watercourse morphology alteration (dams, canalisation, trenching and ports (A1.2) is the EA that has the least influence.

EA prioritisation with reference to SC alteration		
	S3-LW	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A7.1	20
2	A5.3	19
3	A7.2	15
4	A2.1	14
5	A7.3	7
6	A5.1	6
7	A2.2	6
8	A1.1	6
9	A6.2	6
10	A8.1	5
11	A8.2	4
12	A5.4	4
13	A3.1	3
14	A2.4	3
15	A6.1	2
16	A4.4	2
17	A4.1	2
18	A6.4	1
19	A1.2	1

Figure 79.

S3-IN: 11 EAs have been identified. Utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals (A2.1) is the EA that has the greatest influence and transport infrastructure (including ports) (A6.1) is the EA that has the least influence.

EA prioritisation with reference to SC alteration		
	S3-IN	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A2.1	10
2	A5.1	10
3	A2.2	6
4	A6.2	5
5	A7.1	4
6	A4.1	4
7	A4.4	4
8	A2.4	4
9	A7.2	2
10	A7.3	2
11	A6.1	1

Figure 80.

S4-LW: 17 EAs have been identified. Urban uses (A7.1) is the EA that has the greatest influence and infrastructure related to coastal/watercourse morphology alteration (dams, canalisation, trenching and ports) (A1.2) is the EA that has the least influence.

EA prioritisation with reference to SC alteration		
	S4-LW	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A7.1	29
2	A2.1	29
3	A7.2	24
4	A5.3	16
5	A7.3	11
6	A5.1	11
7	A2.2	10
8	A1.1	8
9	A8.1	6
10	A4.4	6
11	A4.1	6
12	A8.2	5
13	A5.4	4
14	A3.1	3
15	A6.1	2
16	A6.4	1
17	A1.2	1

Figure 81.

S4-IN: 5 EAs have been identified. Urban uses (A7.1) is the EA that has the greatest influence and marine aquaculture (A5.1) is the EA that has the least influence.

EA prioritisation with reference to SC alteration		
	S4-IN	← SC (select from list)
ranking	prioritised EAs	Prioritisation score
1	A7.1	3
2	A7.3	2
3	A7.2	1
4	A6.1	1
5	A5.1	1

Figure 82.

4. Identification of the Main Interaction and Conclusions Including Gaps and Transboundary Aspects

4.1. Matrix of the Main Interactions

For the identification of the main interactions, the prioritisation matrices of status alterations represented in the section "Prioritisation of Altered SCs" were taken into account first, considering that most altered status components represent the primary element of criticality highlighted by the analysis and, consequently, the main driver for the identification of the most relevant interactions between economic activities and EOs (state and pressure) analysed in the CAMP area.

Once the main alterations of the SCs were identified, an evaluation was carried out on the activities that are most responsible for them. This step was possible through the prioritisation matrices between EAs and SCs represented in the section "Prioritisation of EAs with Respect to a Given SC", which allowed the ranking of the EAs based on the potential impacts generated by the pressures they produced. These activities were then analysed by evaluating the overall pressure they exerted on the environment, through the prioritisation matrix (Fig. 6 and 49).

Starting from the previous matrices, the choice of specific activities to consider as priorities was therefore based on the evaluation of the reference environmental context, of which it was possible to obtain an overview through collecting reports and available data, simplified by the aggregation of information made possible through the use of the EIAT itself.

Once the key EAs had been identified, it was then possible to identify the set of the most generated pressures within the EA/EP Matrix (Fig. 4 and 47).

This set of pressures was then verified by comparing it with the SC-EP prioritisation matrix (Fig. 34 and 74), where the pressures potentially responsible for the SCs alteration are identified and ranked.

Considering that the goal of the analysis is to identify the main interactions in order to determine operational recommendations for decision-makers that are capable of improving the environmental state while also evaluating the need for intervention in the economic activities responsible, we proceeded to identify the set of main interactions presented below.

From the analysis of Table 1, several main interaction flows can be discerned.

Table 1 provides a structured and classified representation of state alterations, correlated economic activities, and corresponding pressures. The identification of the main interactions is carried out by an expert, who relies on specific evaluations based on the data presented in the table.

Below, the flows "State Alteration – Responsible Economic Activities – Responsible Pressures" are examined, which constitute the set of primary interactions. These flows are highlighted in the table in order of relevance. The examination of the main interactions, carried out by the expert, has allowed, based on the available official information, an evaluation of the possible causal links that have emerged from the analysis between pressures, states and impacts, reporting, where available, the evidence of such findings from official data.

Table 1. Matrix of Interaction in descending order of relevance – Italy

Status components	Priority EAs responsible for the SC alteration	Priority EAs in terms of their overall Environmental Pressure Level	Priority EPs generated by the selected EAs	Priority EPs responsible for the SC alteration
S4 – LW	A7.1 (Urban uses) A5.3 (Agriculture) A1.1 (Land take for urban industrial and agricultural uses) A8.2 (Tourism, sporting and recreational (activities)	A5.3 (Agriculture) A1.1 (Land take for urban industrial and agricultural uses) A8.2 (Tourism, sporting and recreational (activities) A7.1 (Urban uses)	P1.1, P4.5	P1.1, P4.4, P4.5, P5.3, P2.1, P5.2, P5.1
S3 – LW	A5.3 (Agriculture) A1.1 (Land take for urban industrial and agricultural uses) A7.1 (Urban uses) A8.2 (Tourism, sporting and recreational (activities)	A5.3 (Agriculture) A1.1 (Land take for urban industrial and agricultural uses) A8.2 (Tourism, sporting and recreational (activities) A7.1 (Urban uses)	P1.1, P4.5	P4.5, P4.2, P1.1, P.4.4, P4.3, P2.1, P1.2, P5.2, P5.3, P5.1, P3.1
S1 – LW	A5.3 (Agriculture) A1.1 (Land take for urban industrial and agricultural uses) A7.1 (Urban uses) A8.2 (Tourism, sporting and recreational (activities)	A5.3 (Agriculture) A1.1 (Land take for urban industrial and agricultural uses) A8.2 (Tourism, sporting and recreational (activities) A7.1 (Urban uses)	P1.1, P4.5	P4.5, P5.4, P4.4, P4.3, P1.1, P4.1, P5.2, P5.3, P5.1, P3.1
S3 – IN	A6.2 (Transport – shipping) A1.2 (Infrastructure related to coastal/watercourse morphology alteration (dams, canalisation, trenching and ports)	A6.2 (Transport – shipping) A1.2 (Infrastructure related to coastal/watercourse morphology alteration (dams, canalisation, trenching and ports) A5.1 (Marine aquaculture) A4.1 (Fish and shellfish harvesting)	P5.3, P2.1, P4.2, P4.3, P4.4	P4.5, P4.2, P2.1, P1.1, P4.4, P4.3, P5.2, P5.3
S1 – IN	A6.2 (Transport – shipping) A4.1 (Fish and shellfish harvesting) A5.1 (Marine aquaculture)	A6.2 (Transport – shipping) A5.1 (Marine aquaculture) A4.1 (Fish and shellfish harvesting)	P4.1, P4.2, P4.3, P4.4	P4.3, P4.1, P1.1, P4.5, P4.4, P5.2, P5.3

Landward

Interaction 1: Coastal ecosystems, landscapes, seascape coastal wetlands, estuaries, coastal forests and woods, and dunes "S4" is the state that showed the highest degree of alteration in the LW area (Arpa Puglia, 2022).

Table 1 shows that the economic activities most responsible for the status alteration are urban uses (7.1), agriculture (A5.3), land take for urban industrial and agricultural uses (A1.1), and tourism, sporting and recreational (activities) (8.2). In the most urbanised areas, the impact of the urban uses (A7.1) activity is indeed predominant. However, considering that urban uses (A7.1) maintains a more localised spatial connotation for the CAMP area, it should be considered as less widespread and impactful in terms of state alteration across the entire project area.

Regarding tourism, sporting and recreational (activities) (8.2), the activity has a significant environmental impact. However, considering the variation in tourist intensity based on the season, it was decided to assign it a lower environmental impact than other economic activities considered (Puglia, 2021).

Agriculture (A5.3) and land take for urban industrial and agricultural uses (A1.1) were therefore the economic activities considered in interaction 1.

Indeed, agriculture is a leading activity in Puglia. Given the fragility of the aforementioned environmental conditions in the reference territorial context, it is logical that the analysis has highlighted a causal link between agricultural activity and the alteration of environmental states. Along the Adriatic coast of Puglia, agriculture is one of the main economic activities. The use of pesticides and fertilisers can cause the pollution of coastal waters and damage marine ecosystems. Moreover, soil erosion, the intensive development of greenhouses, the inefficient management of irrigation water, and the impact on biodiversity are other environmental pressures generated by agriculture in Puglia.

However, it is important to note that agriculture can also adopt sustainable practices to mitigate its negative impacts on the environment, such as the use of organic farming techniques, conservation of local varieties, and efficient water resource management.

In reference to the pressures, considering the results shown in Table 1 and the considerations related to the significant economic activities, the pressures deriving from such activities and indicated in the Table are: EPs physical damage/disturbance and morphological alteration of the substrate, seabed, coast, land and coastline, including erosion/accretion (P1.1), cultivation/artificialisation of natural habitats (P4.5).

The last column of Table 1 also lists other significant pressures responsible for state alteration.

However, in order to focus on the main interactions, it was decided to consider these additional pressures as less relevant than those also presented in the penultimate column of Table 1. This is because such other pressures are generated by a variety of economic activities, unlike those identified as priorities in the penultimate column.

Interaction 2: Seafloor and coastal integrity "S3", understood as "coastal integrity", is the second most altered state in the LW area.

The economic activities potentially responsible for state alteration are the same as those identified in interaction 1.

In fact, Anthropogenic transformations have deeply altered the regional coastal landscapes, influencing their morphology, quality and identity. Urbanisation and infrastructural developments have exerted intense pressure on the coastal areas, often without adequately considering natural dynamics. Natural factors, such as sea-level change and coastal dynamics, combined with human activities, have altered the dynamics of the coastlines. A noticeable result is the sediment deficit affecting many of Puglia's beaches. The increasing urbanisation has rendered the coastal system rigid and incapable of adapting to environmental variations. As a result, there has been an inland migration of the coastal system, detrimental to rocky coasts and dune areas (al., 2002).

Regarding the pressures, considering the results shown in Table 1 and the considerations related to the significant economic activities, the pressures deriving from such activities and indicated in the Table are: EPs physical damage/disturbance and morphological alteration of the substrate, seabed, coast, land and coastline, including erosion/accretion (P1.1), cultivation/artificialisation of natural habitats (P4.5).

Interaction 3: Biodiversity "S1" is the third altered state in the LW area.

The economic activities potentially responsible for state alteration are agriculture (A5.3) and land take for urban industrial and agricultural uses (A1.1). Regarding urban uses (7.1) and tourism, sporting and recreational (activities) (8.2), the same considerations highlighted in interaction 1 apply here.

Regarding the pressures, considering the results shown in Table 1 and the considerations related to the significant economic activities, the pressures deriving from such activities and indicated in the Table are: EPs physical damage/disturbance and morphological alteration of the substrate, seabed, coast, land and coastline, including erosion/accretion (P1.1), and cultivation/artificialisation of natural habitats (P4.5).

As already mentioned, agriculture is one of the main economic activities in Puglia. The conversion of natural habitats into agricultural land may have therefore led to the direct loss of natural habitats, with the consequent disappearance of animal and plant species that depend on those specific habitats (Puglia, 2021).

Interface

Regarding the Interface zone of the Puglia territory, two interaction flows have been identified.

Interaction 1: The most altered state in the IN area is Seafloor and coastal integrity "S3".

Activities transport – navigation (A6.2) and infrastructure related to the alteration of coastal morphology/ watercourses such as dams, canals, excavations and ports (A1.2) are potentially responsible for the main state alterations.

These alterations could be mainly caused by the input of litter (solid waste matter and microsized litter) (P5.3), changes to hydrological conditions (e.g. wave action, currents, salinity, temperature and the input/extraction of water) (P2.1), the introduction of microbial pathogens (P4.2), removal of species, selective extraction of target/non-target species (P4.3) and disturbance, injury or death of species (P4.4).

These activities and their related EPs could have a significant impact on the ecological status.

Coastal infrastructure can alter the morphology of watercourses, disturb natural habitats, and affect coastal dynamics. Indeed, on the Puglian coast of the CAMP Area, there is the Port of Brindisi, which represents a hub for maritime transport and can involve activities such as the construction of port infrastructure, thus altering the coastal morphology. The Port of Otranto, moreover, is another important landing point for vessels (Puglia, 2021).

Interaction 2: The second most altered state in the IN zone is "Biodiversity S1." The activities transport – navigation (A6.2), marine aquaculture (A5.1) and fishing and the collection of fish and shellfish (A4.1) are potentially responsible for the main state alterations (MSP, 2022). These alterations could primarily be caused by biological type EPs, such as the transfer of native species, the introduction/diffusion of non-indigenous or genetically modified species (P4.1), the removal of species, selective extraction of target/non-target species (P4.3) and the disturbance, injury or death of species (P4.4). *Posidonia oceanica* plays a significant role in the marine ecosystem, and *Posidonia* meadows are considered a biological indicator of the health status of the marine environment. In Puglia, the PREI index is used to assess the ecological state of areas where *Posidonia* is present, and ARPA reports indicate that the overall ecological status is considered poor [3]. These activities and their related EPs could have a substantial impact on Biodiversity. Maritime transport might have led to water pollution, collisions with marine fauna, and the introduction of invasive species through ballast water discharge. Fishing and the collection of fish and shellfish can result in the overexploitation of fish resources, damage to marine habitats, and the selective removal of species, including effects on non-target species. Based on this information, possible operational approaches to address these issues might be the adoption of management and mitigation measures for the impacts of transport activities, coastal infrastructure and fishing in the Puglia interface zone. This could encompass regulating maritime traffic, advocating sustainable navigation practices, preserving native species, preventing the introduction of invasive species, sustainably managing fish resources, and sustainably designing and overseeing coastal infrastructure.

For the analysis shown in Table 2, an approach analogous to the Italian side was carried out to describe the main interactions.

Table 2. Matrix of Interaction in descending relevance order – Albania

Status components	Priority EAs responsible for the SC alteration	Priority EAs in terms of their overall Environmental Pressure Level	Priority EPs generated by the selected EAs	Priority EPs responsible for the SC alteration
S3– LW	A7.1 (Urban uses) A5.3 (Agriculture) A7.2 (Industrial uses)	A5.1 (Marine aquaculture) A7.1 (Urban uses) A5.3 (Agriculture) A7.2 (Industrial uses)	P2.1, P4.5, P5.4	P4.5, P1.1, P5.2, P4.2, P5.3, P4.3, P1.2, P4.4, P2.1, P5.1, P3.1
S2 – LW	A5.1 (Marine aquaculture) A6.1 (Transport infrastructure (including ports))	A5.1 (Marine aquaculture) A7.1 (Urban uses) A5.3 (Agriculture) A7.2 (Industrial uses)	P4.1, P5.3	P4.1, P4.3, P4.4
S3 – IN	A2.1 (Utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals) A5.1 (Marine aquaculture)	A5.1 (Marine aquaculture) A2.1 (Utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals)	P4.3, P4.2, P1.2	P4.3, P4.2, P1.2, P5.3, P5.2, P4.4, P2.1
S2 – IN	A4.1 (Fish and shellfish harvesting) A5.1 (Marine aquaculture)	A2.1 (Utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals)	P4.1, P4.3	P4.3, P4.1, P4.4

Landward

Interaction 1: Seafloor and coastal integrity "S3" is the state that has shown the highest degree of alteration in the LW zone. The analysis highlights that human activities, such as urban land use (A7.1), agriculture (A5.3) and industrial land use (A7.2), are responsible for the principal status alterations. It has been found that rapid urban developments have impacted the cleanliness of the coast. There is a clear formation of a linear urban system and services along the coastline that is almost uninterrupted. Based on the needs for housing and employment and the increase of economic income, a second phenomenon in the coastal region is related to the demand for second homes or holiday homes for the strata of society with above-average incomes. This phenomenon is also associated with the requirements for increased tourist infrastructure and modern standards (Mapping of Environmental Issues Along the Albanian Coast, 2021). These alterations are primarily caused by various environmental pressures, including:

1. Cultivation and artificialisation of natural habitat (P4.5): Human activities such as urban land use, intensive agriculture, and industrial uses can lead to the conversion of natural habitats into urban areas, cultivated lands, or industrial infrastructure. This can result in the destruction or transformation of natural habitats, compromising biodiversity and ecological balances.
2. Input of CO_2 and greenhouse gases (P5.4): Human activities, including urban land use, intensive agriculture, industrial uses and transport, are one of the main sources of CO_2 and greenhouse gas emissions. These emissions contribute to climate change, with adverse effects on coastal ecosystems and wetlands, such as sea-level rise, ocean acidification, and changes in species distribution.

Interaction 2: Marine and coastal food webs and fish stocks "S2", understood in this context as "coastal food webs" is the second most altered state in the LW zone. The analysis highlights that human activities, such as marine aquaculture (A5.1) and transport infrastructure (including ports) (A6.1), are responsible for the principal status alterations. These alterations are primarily caused by various environmental pressures, including:

1. Transfer of native species and the introduction/ diffusion of non-indigenous or genetically modified species (P4.1): This pressure can be influenced by various human activities, such as international trade, goods transport and marine aquaculture, which can facilitate the introduction of non-indigenous species and the spread of invasive organisms.

2. Input of solid waste and microplastics (P5.3): Human activities, including industrial uses, urban land use and aquaculture, could generate a significant amount of solid waste and microplastics. Improper disposal or water pollution can cause these wastes to end up in coastal zones and wetlands, damaging marine ecosystems and affecting biodiversity and water quality.

All these human activities exert significant pressures on the coastal environment, compromising biodiversity, water quality and ecological balances. In this respect, possible operational approaches to address these issues could involve the adoption of sustainable practices for all these activities, such as responsible urban planning, the use of eco-friendly aquaculture techniques, the adoption of sustainable agricultural practices, and the implementation of clean technologies and waste management in industrial applications. Only through sustainable management and the mitigation of negative impacts can the preservation and protection of coastal zones and wetlands be ensured (UNEP/MAP, Jun 17, 2020).

Interface

In the Interface zone of the Albanian territory, two main interaction flows have been identified.

Interaction 1: Seafloor and coastal integrity "S3" is the state that has shown the highest degree of alteration in the IN zone. The analysis highlights that human activities, such as marine aquaculture (A5.1) and the use of natural resources, including the extraction/mining of sand, gravel, rocks and minerals (A2.1), are potentially responsible for the main status alterations. The interface zone of the Albanian coast is particularly sensitive to various environmental pressures and human activities and is characterised by a complex interaction between marine and terrestrial ecosystems, which requires careful management to preserve biodiversity and maintain the balance of ecosystems. These alterations are primarily caused by various environmental pressures, including:

1. Biological pressures, such as the introduction of microbial pathogens (P4.2) and the selective removal of species (P4.3), can negatively impact marine ecosystems in the Albanian coastal zone. If marine aquaculture is not properly managed, it can lead to the introduction of exotic or genetically modified species, which can alter ecological balances and local biodiversity (Mapping of Environmental Issues Along the Albanian Coast, 2021).

   Moreover, the selective extraction of target or non-target species can affect the composition of marine communities and habitat structure.
2. Physical pressures, such as the extraction of marine and terrestrial bottoms (soil and subsoil) (P1.2), can cause direct alterations to habitats and the morphology of the land. The extraction of sand, gravel, rocks and minerals can lead to the destruction of marine and coastal habitats, the loss of biodiversity, and the alteration of the physical characteristics of the land. The extraction of sand, gravel, rocks and minerals can have significant impacts on coastal and marine habitats. This activity can cause the destruction of marine habitats, loss of biodiversity and alteration of the physical characteristics of the land. In this respect, a possible operational approach to address this issue could involve the adoption of management and monitoring measures to minimise the impacts of extraction on marine communities and coastal ecosystems.

Interaction 2: Marine and coastal food webs and fish stocks "S2" are identified as the second altered state in the IN zone.

The analysis emphasises that human activities such as marine aquaculture (A5.1), and fishing and harvesting fish and shellfish (A4.1) are potentially responsible for the principal alterations of status.

Marine fishing represents the most significant sector within the Albanian fishing industry. Albania's fishing fleet mainly operates from four ports: Durrës, Vlorë, Shëngjin and Sarandë, providing employment for approximately 1,870 individuals. The largest proportion of fishing activity is attributed to aquaculture (52.09%) and marine fishing (26.76%).

Biological pressures including the displacement of native species and the introduction and proliferation of non-indigenous or genetically modified organisms (P4.1), alongside the selective extraction of species (P4.3), have the potential to detrimentally impact the marine ecosystems of the Albanian coastline.

Certain fishing practices, such as bottom trawling, if not managed responsibly, can inflict damage on marine

habitats, including seagrass meadows and rocky substrates.

Intensive aquaculture significantly contributes to marine water pollution through antibiotic usage and the concentration of contaminants associated with the high fish population densities in these areas. Another adverse consequence of concentrated aquaculture operations is genetic pollution, which arises when wild fish interbreed with species from aquaculture by accident.

Furthermore, alterations in water quality and climatic factors have intensified the competition of other marine phanerogams against native plants like *Posidonia oceanica*.

These influences have modified the deepest extent that this community can reach and/or the dynamics of the decomposing seagrass beds.

The displacement of *Posidonia* beds and their replacement by non-native species such as *Zostera noltii* and *Cymodocea nodosa* are disrupting the ecological equilibrium of the trophic networks along the Albanian coast.

To mitigate these issues, a viable operational approach could be the implementation of sustainable aquaculture practices, including the selection of indigenous species and the management of waste and chemicals, to lessen the negative impacts on the coastal interface zone.

4.2. Gaps

As represented in paragraphs 3 and 4, this study encountered several information gaps in the project area related to Status Components, Pressures, Impacts and Economic Activities.

In order to address these gaps, the following strategy was implemented: if the absence of data for a specific element of analysis (e.g., pressure or impact) was simply due to the absence or negligible presence of such an element in the area, the element was considered as not present or relevant. On the contrary, if data positively identified the presence of a specific element (e.g., pressure or impact) in the area being test, but was insufficiently precise to allow a clear classification of such an element in the frame of the scoring system, the element would be regarded as present with a nominal weight derived either from Expert Judgement or from an ancillary data source representative of similar areas or situations. This approach was implemented to increase the stability of the tool with respect to cumulative pressure assessment.

In particular, the types of gaps encountered concerned the unevenness of the data, both in terms of quality and territorial coverage. This did not allow for the valorisation of the indicators developed in the methodology, based solely on the quantitative values of the monitoring related to the Common Indicators of the IMAP, instead having to rely in many cases on the descriptive summary reports published by the competent authorities. In particular, a prevalence of information gaps emerged in the Albanian area concerning the completing the information framework of economic activities, in particular activities A1.3, A1.4, A1.5, A2.3, A2.4, A4.2, A4.4, A5.2, A7.3, A9.1 and A10.1. As for the pressures, the gaps encountered concerned: P1.2, P3.2, P3.4 and P4.3.

For the Italian area, the detected information gaps concerned the economic activities: A1.2, A1.3, A1.5, A2.3, A2.4, A4.2, A4.3 and A7.3. As for the pressures: P3.4, P4.2, P4.3 and P5.3.

For the impacts, it is possible to identify the gaps respectively in Figure 7 for Italy and in Figure 50 for Albania, where the nominal value “p” for plausible has been inserted.

A particular element to highlight for the Italian side is the lack of information regarding the impacts on Status Component S2 “Marine and coastal food webs and fish stocks”.

4.3. Transboundary Aspects

To correctly evaluate transboundary aspects, the following key characteristics should be investigated among the DPSIR elements:

- EAs with an intrinsic transnational scope (e.g., marine transport and pipelines) or EAs located close to or beyond transnational borders (e.g., offshore plants)
- EAs with the potential to generate pressures capable of diffusing, propagating or acting at a transnational level (e.g., input of contaminants, marine litter and micro-litter).

The use of these criteria has allowed us to complete the picture of activities with potential influence at the transboundary level, as represented in Figure 3 for Italy and in Figure 46 for Albania.

The methodology has also allowed us to analyse the pressures from the point of view of their transboundary components. In this case, where the available information has allowed us to identify pressures for which a significant transboundary component was found, an in-depth analysis was carried out in order to estimate the percentage of exogenous pressure from the analysis area that contributed to the specific total pressure value found in the area.

The result of the analysis of the pressures and their transboundary component can be consulted in Figure 4 for Italy and in Figure 47 for Albania. In particular, in Italy, for pressure P5.2 – "Input of contaminants (synthetic, non-synthetic or radionuclides) – diffuse/point sources, atmospheric deposition and acute events", occurring in the landward zone, a percentage of 15% of transboundary origin was found relative to the analysis area (Arpa Puglia, 2022).

4.4. Operational Aspects

In conclusion, the use of the methodology and the related EIAT tool has allowed, through the use of the developed quali-quantitative indicators, us to synthesise and uniquely quantify various information with new level of detail, making them comparable and interoperable with each other in the various stages of the DPSIR analysis.

The tool has also made it possible to identify and, at the same time compensate for the presence of existing information gaps, still allowing us to proceed with the DPSIR analysis, minimising the level of inaccuracy due to the scarcity of some information.

The type of management and synthesis of information developed has therefore allowed the elaboration of a prioritisation system that automatically traces back the EA→EP→SC flow of interactions, as well as the effects of EAs and EPs, synthesising, classifying and prioritising them in terms of their environmental relevance and their impact on SCs.

5. Additional Resources

A list of supporting documents and resources relative to Italian area DPSIR analysis is presented below:

- http://adriplan.eu
- https://www.arpa.puglia.it/pagina2837_indicatori-ambientali.html
- https://geoportal.asig.gov.al/map/?fc_name=Ortofoto_1999&auto=true
- http://gismargrey.bo.ismar.cnr.it:8080/mokaApp/apps/mare_v1/index.html?null
- https://rsaonweb.weebly.com/matrici-ambientali.html
- https://www.sid.mit.gov.it/
- http://www.strategiamarina.isprambiente.it/consultazioni/consultazione-2021

6. Reference Maps

Supporting GIS maps presenting an overview of the most relevant EAs identified for the CAMP areas are presented below.

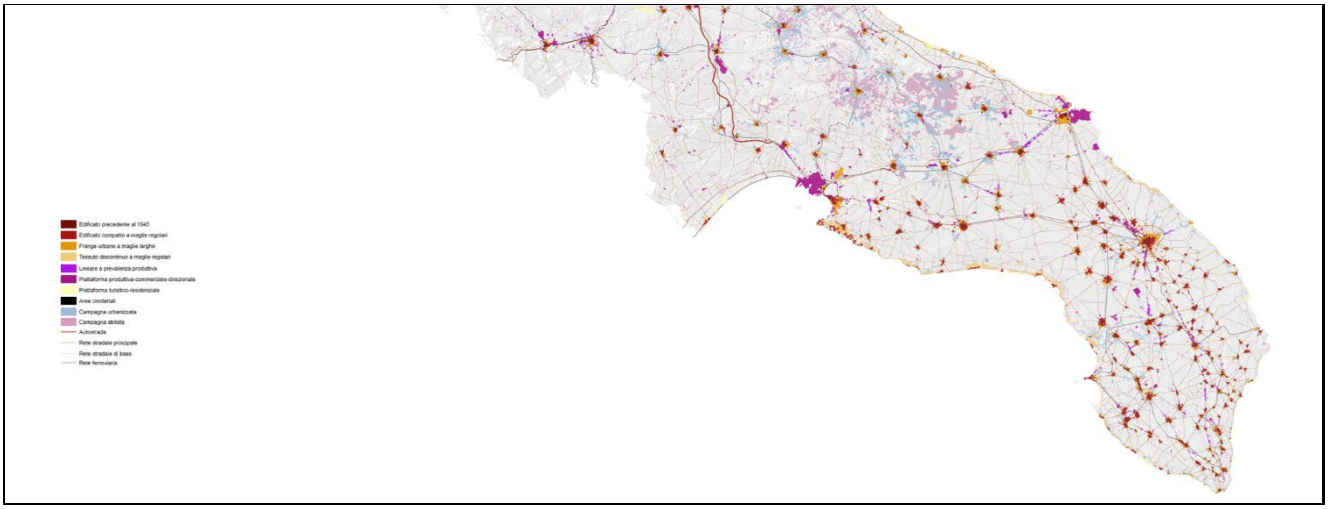

Figure 83. Urban and industrial uses (A7) – Apulia (Italy)

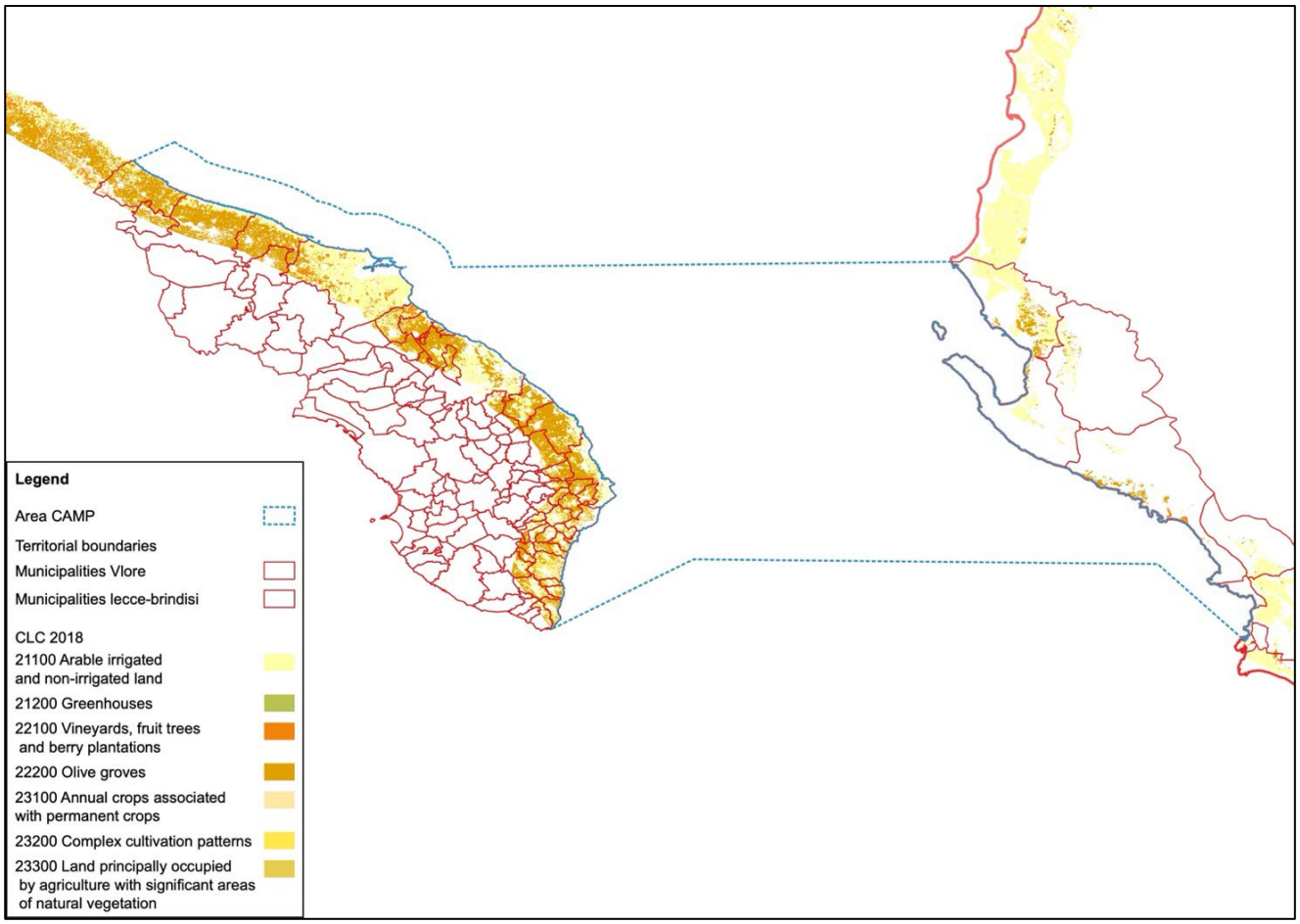

Figure 84. Agriculture (A5.3) – Coast Camp Area

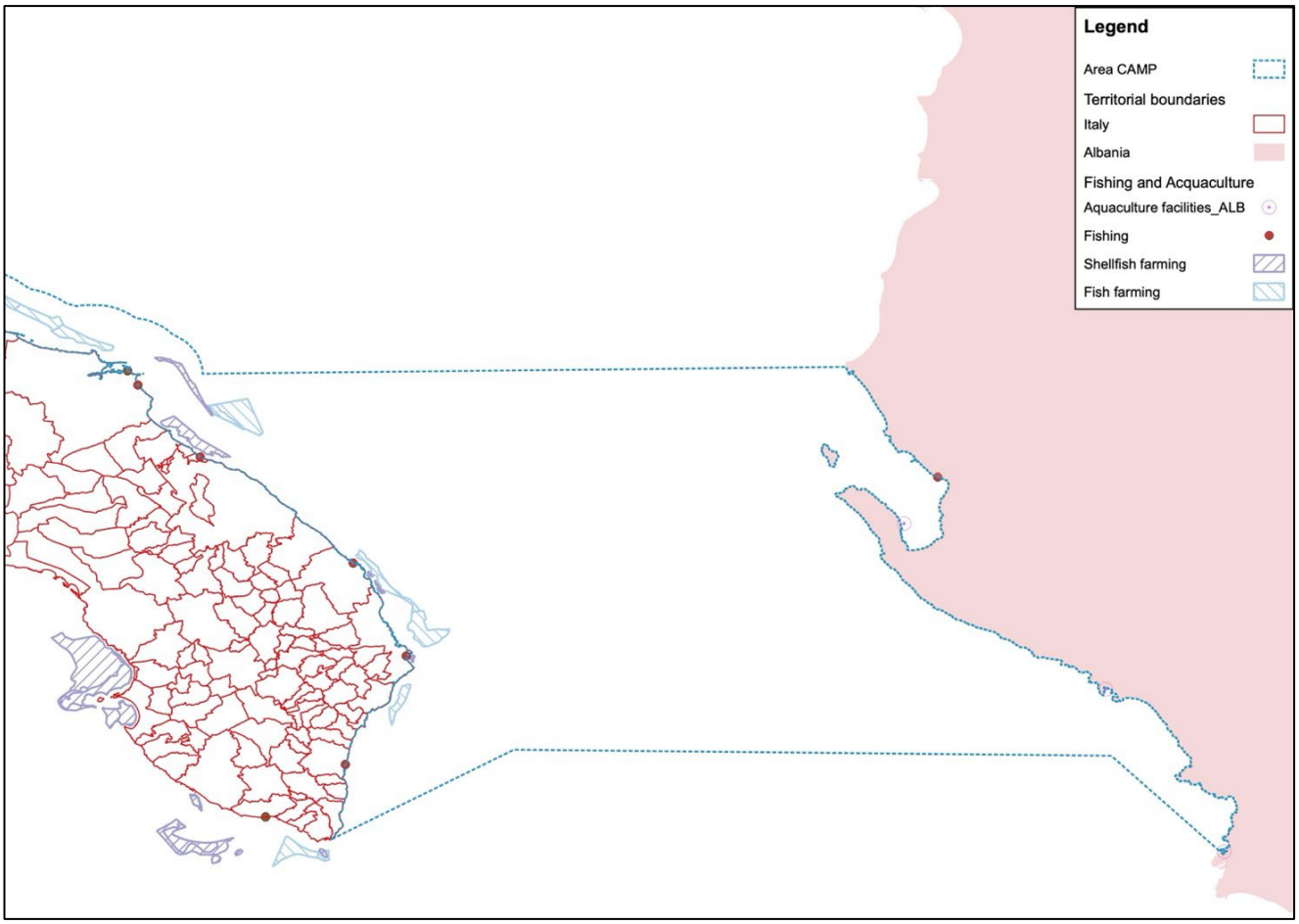

Figure 85. – Extraction of living resources (A4) and the Cultivation of living resources A5) – Apulia (Italy)

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Annex 2:
Analysis of the Provisions of the Main Relevant Documents of the UNEP/MAP Barcelona Convention System

Scope of the Present Work

The present document aims to provide an analysis of the provisions of the main relevant policy documents, related to key interactions identified, based on the results of the matrix of interactions developed in Task 1.

This analysis allows us to identify gaps in policy documents and represents a preliminary step to determine operational recommendations for decision-makers that are capable of improving the environmental state while also evaluating the need for intervention relating to responsible economic activities.

Methodology

The first step of the analysis was the selection of specific interactions between economic activities and EOs (of state and pressure) analysed in the CAMP area.

As described in Task 1, the main driver for the identification of the most relevant interactions is the altered status components. Once the main alterations of the SCs were identified, an evaluation was carried out of the activities most responsible for them.

In the current work, priority has been given to the interactions that are responsible for the most significant status alterations in a specific ICZM Zone (LW and IN). This means that the analysis of the relevant provisions has only been performed for a specific interaction in a specific ICZM Zone. Indeed, the status alteration score can change from one zone to another. Moreover, a specific economic activity, while localised in a confined zone, can produce a spectrum of pressures able to extend over all ICZM zones.

Policy documents that have been taken into consideration are those of the Barcelona Convention system and EU policy documents available in the Common Regional Framework for ICZM. A further selection has been made in order to focus on those that are particularly relevant for the selected interactions.

Furthermore, the list of documents available in the Common Regional Framework has been duly updated in light of the changes that have occurred from 2019 to today, particularly taking into account the new documents and/or updates/amendments to old documents adopted at COP22 held in Antalya, Turkey, in December 2021. One example is the Strategic Action Plan for the conservation of marine and coastal biodiversity in the Mediterranean - (SAP BIO) (2003), which, under the mandate of COP21, was replaced by the Post-2020 Strategic Action Programme for the Conservation of Biological Diversity and Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO), adopted at COP22.

As for the EU documents, the integration of the list available in the Common Regional Framework for ICZM has involved the Strategic guidelines for more sustainable and competitive EU aquaculture for the period 2021 to 2030, which is particularly relevant to interaction S2 (Marine and coastal food webs and fish stocks) - A5.1 (Marine aquaculture). The analysis of the EU documents was limited to identifying those relevant for the selected interactions, without going into the details of the regulatory provisions.

"Guidelines" and "Strategies" were also considered among the documents to be analysed. Indeed, while not binding for the Parties to the Barcelona Convention, they can constitute the reference framework for a given interaction (or one of its components), as well as a starting point to issue future regulatory prescriptions.

Lastly, this analysis only examined documents containing either a specific reference to the Status Components or to the economic activities when considered from the perspective, not necessarily explicit, of the interaction with the Status Component concerned. The Common Regional Framework for Integrated Coastal Zone Management is listed in the documents. However, since it constitutes the reference basis of the present analysis, its regulatory provisions have not been specifically evaluated.

With specific reference to activity A1.1 (Land take for urban, industrial and agricultural uses) involving aspects related to both pollution and land use, only provisions related to land take in the agricultural field have been taken into account since the main land use identified is agricultural.

The analysis has been conducted according to the following main criteria:

1. presence of a specific provision that is relevant for the selected interaction: yes-no
2. identification of the major strategic elements of the provision

In order to perform the aforementioned analysis, 7 tables have been developed:

- Tables 1 and 2 illustrate, for Italy and Albania respectively, the priority interactions in terms of the impact of the economic activities on a specific status component in a given ICZM area, based on the conclusions of Task 1 "Application of the Analysis Methodology on the CAMP area and the Evaluation of Environmental Interactions". For Albania, a further selection was made, favouring only the most significant priority interactions, i.e., those listed at the beginning of the respective list in Task 1 mentioned above.
- Table 3 contains the list of the most relevant documents and tools of the UNEP/MAP system, as well as of the EU and provides a link to the official version of the documents.
- Tables 4 (Italy) and 5 (Albania) identify, for each interaction and for each document of the UNEP/MAP system listed in Table 3, the presence of any relevant regulatory provisions, briefly describing them.
- Tables 6 (Italy) and 7 (Albania) associate the identified interactions with the most relevant EU documents.

Table 1. Selected Interactions – Italy

The human activities most responsible for the main status alterations are reported in the table below. For each relevant status component, the most relevant activities for Italy have been reported.

Status Component – ICZM Zone	Priority EAs in terms of their overall Environmental Pressure Level
S1 (Biodiversity) - LW	A5.3 (Agriculture); A1.1 (Land take for urban industrial and agricultural uses);
S3 (Seafloor and coastal integrity) - LW	A5.3 (Agriculture); A1.1 (Land take for urban industrial and agricultural uses);
S4 (Coastal ecosystems, landscapes, seascape, coastal wetlands, estuaries, coastal forests and woods, dunes) - LW	A5.3 (Agriculture); A1.1 (Land take for urban industrial and agricultural uses)
S1 (Biodiversity) - IN	A6.2 (Transport – shipping); A4.1 (Fish and shellfish harvesting)
S3 (Seafloor and coastal integrity) - IN	A6.2 (Transport – shipping); A1.2 (Infrastructure related to coastal/watercourse morphology alteration (dams, canalisation, trenching and ports)

Table 2. Selected Interactions – Albania

The human activities most responsible for the main status alterations are reported in the table below. For each relevant status component, the most relevant activities for Albania have been reported.

Status Component – ICZM Zone	Priority EAs in terms of their overall Environmental Pressure Level
S2 (Marine and coastal food webs and fish stocks) - LW	A5.1 (Marine aquaculture)
S3 (Seafloor and coastal integrity) - LW	A7.1 (Urban uses)
S2 (Marine and coastal food webs and fish stocks) - IN	A4.1 (Fish and shellfish harvesting)
S3 (Seafloor and coastal integrity) - IN	A2.1 (Utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals)

Table 3. List of the Relevant Policy Documents

Context - Category	ID	Document	Link
UNEP/MAP Barcelona Convention System			
Protocols	1	Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol)	ProtocolSPABD_Consolidated_eng.pdf (unep.org)
	2	Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities (LBS Protocol)	80ig19_finalact_efas_lbs_eng.pdf (unep.org)
		Amendments to the Protocol adopted on 7 March 1996, in Syracuse	96ig7_4_lbsprotocol_eng.pdf (unep.org)
		Amendments to Annexes I, II and IV to the Protocol adopted on 10 December 2021, in Antalya	Decision IG. 25/5 21ig25_27_2505_eng.pdf (unep.org)
	3	Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (Prevention and Emergency Protocol)	56. (1-02) REMPEC Protocol 2002 (E).pdf
	4	Protocol for the Protection of the Mediterranean Sea Against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Offshore Protocol)	https://wedocs.unep.org/rest/bitstreams/2336/retrieve
		Amendments to the Annexes to the Protocol (adopted on 10 December 2021, in Antalya)	Decision IG. 25/7 21ig25_27_2507_eng.pdf (unep.org)
	5	Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Waste and their Disposal (Hazardous Wastes Protocol)	https://wedocs.unep.org/rest/bitstreams/2593/retrieve
	6	Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (Dumping Protocol)	Texto Protocolo en inglés (unep.org)
		Amendments to Annex 1 adopted on 11 September 1987, in Athens	87ig74_5_dumping_eng.pdf (unep.org)
		Amendments to the Protocol adopted on 10 June 1995, in Barcelona	95ig6_7_dumping_protocol_eng.pdf (unep.org)
		Amendments to the Annex to the Protocol adopted on 10 December 2021, in Antalya	Decision IG. 25/6 21ig25_27_2506_eng.pdf (unep.org)
	7	Protocol on Integrated Coastal Zone Management in the Mediterranean (ICZM Protocol)	Microsoft Word - Final Act ICZM 25jan08.doc (unep.org)
Regional Strategies	8	Mediterranean Strategy for Sustainable Development 2016-2025	Decision IG.22/2 16ig22_28_22_02_eng.pdf (unep.org)
	9	Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED)	Strartegic_Programme_Pollution_Activities.pdf
	10	Post-2020 Strategic Action Programme for the Conservation of Biodiversity and the Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO)	Decision IG.25/11 21ig25_27_2511_eng.pdf (unep.org)

Context - Category	ID	Document	Link
	11	Post-2020 Regional Strategy for Marine and Coastal Protected Areas and Other Effective Area-Based Conservation Measures in the Mediterranean	Decision IG.25/12 21ig25_27_2512_eng.pdf (unep.org)
	12	Mediterranean Strategy for the Prevention of, Preparedness, and Response to Marine Pollution from Ships (2022-2031)	Decision IG.25/16 21ig25_27_2516_eng.pdf (unep.org)
	13	Ballast Water Management Strategy for the Mediterranean Sea (2022-2027)	Decision IG.25/17 21ig25_27_2517_eng.pdf (unep.org)
Regional Frameworks	13	Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas (RFCCA)	Decision IG.22/06 rccaf_eng.pdf (unep.org)
	14	Common Regional Framework for Integrated Coastal Zone Management	Decision IG.24/05 19ig24_22_2405_eng.pdf (unep.org)
Action Plans	15	Regional AP on Sustainable Consumption and Production (SCP)	Decision IG.22/5 16ig22_28_22_05_eng.pdf (unep.org)
	16	Mediterranean Offshore AP in the Framework of the "Offshore Protocol"	16ig22_28_22_03_eng.pdf (unep.org)
	17	AP for the Management of the Monk Seal	http://www.rac-spa.org/sites/default/files/action_plans/monkap.pdf
	18	Updated Regional Strategy for the Conservation of Monk Seals in the Mediterranean	Decision IG.24/07 19ig24_22_2407_eng.pdf (unep.org)
	19	Updated AP for the Conservation of Marine Turtles in the Mediterranean	Decision IG.24/07 19ig24_22_2407_eng.pdf (unep.org)
	20	AP for the Conservation of Cetaceans in the Mediterranean Sea	Decision IG.25/13 21ig25_27_2513_eng.pdf (unep.org)
	21	Updated Action Plan for the Conservation of Marine Vegetation in the Mediterranean Sea	Decision IG.24/07 19ig24_22_2407_eng.pdf (unep.org)
	22	AP for the Conservation of Bird Species Registered in Annex II of the SPA/BD Protocol	AP: http://www.rac- spa.org/sites/default/files/action_plans/bird.pdf Timetable: http://www.rac- spa.org/sites/default/files/doc_birds/birds.pdf
	23	Updated AP for the Conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea	Decision IG.24/07 19ig24_22_2407_eng.pdf (unep.org)
	24	Updated AP Concerning Species Introduction and Invasive Species	Decision IG.22/12 http://www.rac-spa.org/sites/default/files/action_plans/pa_alien_en.pdf
	25	Updated AP for the Conservation of the Coralligenous and Other Calcareous Bio-Concretions in the Mediterranean Sea	Decision IG.22/12 http://www.rac-spa.org/sites/default/files/action_plans/pa_alien_en.pdf
	26	AP for the Conservation of Habitats and Species Associated with Seamounts, underwater caves and Canyons, Aphotic Hard Beds and Chemo-Synthetic Phenomena in the Mediterranean Sea (Dark Habitats Action Plan)	Decision IG.25/13 21ig25_27_2513_eng.pdf (unep.org)
Regional Plans adopted under the LBS Protocol	27	RP on Marine Litter Management in the Mediterranean	Decision IG.21/7 MAP focal point meeting (November 2011) (unep.org)
		Amendments to the Regional Plan on Marine Litter Management in the Mediterranean in the Framework of Article 15 of the Land-Based Sources Protocol	Decision IG.25/9 21ig25_27_2509_eng.pdf (unep.org)
	28	Regional Plan on Urban Wastewater Treatment in the Framework of Article 15 of the Land-based Sources Protocol	Decision IG.25/8 21ig25_27_2508_eng.pdf (unep.org)

Context - Category	ID	Document	Link
	29	Regional Plan on Sewage Sludge Management	Decision IG.25/8 21ig25_27_2508_eng.pdf (unep.org)
	30	RP on the Reduction of Inputs of Mercury	Decision IG.20/8.1 12ig20_8_annex2_20_08_1_eng.pdf (unep.org)
	31	RP on the Reduction of BOD5 in the Food Sector	Decision IG.20/8.2 12ig20_8_annex2_20_08_2_eng.pdf (unep.org)
	32	Regional Plan on the Elimination of Alpha Hexachlorocyclohexane; Beta Hexachlorocyclohexane; Hexabromobiphenyl; Chlordecone; Pentachlorobenzene; Tetrabromodiphenyl Ether and Pentabromodiphenyl Ether; Hexabromodiphenyl Ether and Heptabromodiphenyl Ether; Lindane; Endosulfan, Perfluorooctane Sulfonic Acid, its Salts and Perfluorooactane Sulfonyl Fluoride	Decision IG.20/8.3 12ig20_8_annex2_20_08_3_eng.pdf (unep.org)
	33	RP on the Phasing Out of DDT	Decision IG.19/9 Final ENG Report 24nov09.doc (unep.org)
	34	RP on the Elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, and Toxaphene	Decision IG.19/8 Final ENG Report 24nov09.doc (unep.org)
Roadmaps	35	EcAp Implementation Roadmap	Decision IG.20/4 - 12ig20_8_annex2_20_04_eng.pdf (unep.org)
EU level			
Directives	36	EU Natura 2000 Directives (Birds and Habitat)	Birds Directive: http://ec.europa.eu/environment/nature/legislation /birdsdirective/index_ en.htm Habitat Directive: http://ec.europa.eu/environment/nature/legislation /habitatsdirective/inde x_en.htm
	37	EU Water Framework and Flood Directives	EUR-Lex - 32000L0060 - EN - EUR-Lex (europa.eu) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32007L0060
	38	EU Marine Strategy Framework Directive	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0056
	39	EU MSP Directive	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0089
Policies	40	Common Fisheries Policy (CFP):	Common fisheries policy (CFP) (europa.eu)
		▪ Action plan: Protecting and Restoring Marine Ecosystems for Sustainable and Resilient Fisheries	eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023DC0102
		▪ Implementation of Regulation (EU) No 1379/2013 on the Common Organisation of the Markets in Fishery and Aquaculture Products	Implementation of Regulation (EU) No 1379/2013 on the common organisation of the markets in fishery and aquaculture products (europa.eu)
Strategies and Guidelines	41	EU Biodiversity Strategy for 2030	Biodiversity strategy for 2030 (europa.eu)
	42	Strategic Guidelines for a More Sustainable and Competitive EU Aquaculture for the 2021 to 2030 Period	EUR-Lex - 52021DC0236 - EN - EUR-Lex (europa.eu)

Table 4. Analysis: UNEP/MAP Policy Documents / Selected Interactions – Italy (see Table 1)

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
LW	S1	A5.3 (Agriculture)	SPA/BD Protocol	Art. 3	Parties shall take all the necessary measures to protect, preserve and manage areas of particular natural or cultural value and threatened or endangered species of flora and fauna in a sustainable and environmentally sound way. Therefore, these measures need to be taken concerning agriculture as well.
				Art. 17	In a planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated through the environmental impact assessment.
			LBS Protocol and its amendments	Art. 5	Parties shall elaborate and implement national and regional action plans and programmes to eliminate pollution deriving from land-based sources and activities, in particular to phase out substances that are toxic, persistent and liable to bioaccumulation.
				Annex 1	Agriculture is listed among the sectors of activity to be primarily considered when setting the priorities for the preparation of action plans, programmes and measures.
			Hazardous Wastes Protocol	Art. 8 Annex I Annex III	Regional cooperation to ensure that clean production methods are applied to production processes. Among the categories of waste subject to this Protocol: waste from the production, formulation and use of biocides and phytopharmaceuticals in agriculture including land treatment.
			ICZM Protocol	Art. 9 – 1. (b)	Parties shall ensure that the various economic activities minimise the use of natural resources and take into account the needs of future generations.
				Art. 9 – 2. (a)	Parties have to guarantee a high level of protection of the environment in the location and operation of agricultural and industrial activities so as to preserve coastal ecosystems and landscapes and prevent the pollution of the sea, water, air and soil.
			Mediterranean Strategy for Sustainable Development 2016-2025	Objective 2	Promoting resource management, food production and food security through sustainable forms of rural development.
				Strategic Direction 2.5 - Action 2.5.3.	Develop and strengthen agriculture based on agro-ecological and organic technologies, including organic, labelled and conservation agricultures, controlling and limiting the use of genetically modified organisms.
			Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED)	Chapter 3	Parties undertake to eliminate pollution deriving from land-based sources and activities, in particular to phase out inputs of substances that are toxic, persistent and liable to bioaccumulate.
				Chapter 4	Perturbation of the biological diversity listed among the four pollution-related factors taken into account to establish priority actions for the prevention, reduction and elimination of pollution.
				Chapter 5.2.5.	Provides specific targets and actions for (intensive) agriculture in relation to nutrient load.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Post-2020 SAPBIO	Goal 1	Reduce the threats to biodiversity.
				Target 1.3	Focused on pollution control, particularly plastics, nutrient leakage and noise ("By 2030, all types of pollution are prevented, controlled and significantly reduced to levels that are not detrimental to ecosystem function and biodiversity, including through the significant reduction of plastic and nutrient leakage into the environment, and the significant reduction of light and noise pollution and the amounts of biocides used").
				ANNEX III Actions Table	Action 26. Integrating biodiversity – Expected result: In most Mediterranean countries, biodiversity conservation is mainstreamed in the strategies and planning processes of MSP, including fisheries, aquaculture, agriculture, coastal tourism, ports, maritime transportation, education and also in EIA/SEA frameworks.
			Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas (RFCCA)	Strategic Direction 4.1	Priorities include: vulnerability and interactions of sectors, including agriculture and forestry, as well as water resource management.
			Regional AP on Sustainable Consumption and Production (SCP)	Para 26	Agriculture is one of the priority areas of consumption and production in which the SCP AP aims to achieve a shift to sustainable patterns as a first step.
				Para 32	Agriculture practices are mentioned as exerting great pressure on the local biodiversity.
				Operational objectives and actions	Focused also on agriculture, e.g.: adopt good agricultural practices (1.1), develop the policy and legal framework to promote sustainable agriculture (1.2) etc.
			RP on Marine Litter Management in the Mediterranean	Art. 17	Major agricultural stakeholders shall be involved in the implementation of the regional plan and related actions.
			Regional Plans adopted under the LBS Protocol (other than ML Regional Plan)	Being focused on the progressive reduction of persistent organic pollutants, on sewage sludge management and on urban wastewater treatment, they include many provisions applying to the interaction Biodiversity/Agriculture (e.g. the reuse of reclaimed wastewater for agriculture irrigation), including the adoption of emission limit values.	
			EcAp Implementation Roadmap	Annex II Ecological Objectives - 5 Eutrophication	Human-induced eutrophication is prevented, especially the adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms and oxygen deficiency in bottom waters.
		A 1.1 (Land take for urban industrial	SPA/BD Protocol	Art. 3	Parties shall take all the necessary measures to protect, preserve and manage areas of particular natural or cultural value and threatened or endangered species of flora and fauna in a sustainable and environmentally sound way. Therefore, these measures need to be taken with respect to land take for agricultural uses as well.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
		and agricultural uses)		Art. 17	In a planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated through the environmental impact assessment.
			LBS Protocol and its amendments	Art. 7	Parties shall formulate and adopt common guidelines and standards dealing with the control and progressive replacement of products, installations, industrial and other processes causing pollution of the marine environment.
			ICZM Protocol	Art. 5 (a)	One of the objectives of ICZM is to facilitate, through the rational planning of activities, the sustainable development of coastal zones by ensuring that the environment and landscapes are taken into account in harmony with economic, social and cultural development.
				Art. 6	General principles of ICZM and in particular: f) The formulation of land use strategies, plans and programmes covering urban development and socio-economic activities; h) The allocation of uses throughout the entire coastal zone should be balanced, and unnecessary concentration and urban sprawl should be avoided.
				Art. 8	Parties shall endeavour to ensure the sustainable use and management of coastal zones in order to preserve the coastal natural habitats, landscapes, natural resources and ecosystems.
				Art. 9 – 1. (b)	Parties shall ensure that the various economic activities minimise the use of natural resources and take into account the needs of future generations.
				Art. 9 – 2. (a)	Parties have to guarantee a high level of protection of the environment in the location and operation of agricultural and industrial activities to preserve coastal ecosystems and landscapes and prevent the pollution of the sea, water, air and soil.
				Art. 20	Land Policy: Parties shall adopt appropriate land policy instruments and measures, including the process of planning. To this end, and in order to ensure the sustainable management of public and private land of the coastal zones, Parties may inter alia adopt mechanisms for the acquisition, cession, donation or transfer of land to the public domain and institute easements on properties.
			Mediterranean Strategy for Sustainable Development 2016-2025	Objective 2 Strategic Direction 2.1 Action 2.1.8	Develop action plans for the restoration of land from extractive activities.
				Objective 3 Strategic direction 3.1 Action 3.1.1	Utilise spatial planning systems to ensure balanced development in urban areas that incorporate measures for infrastructure provision, and land take reduction where possible.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Post-2020 SAP BIO	Annex III Actions Table	11. Spatial Planning Support for countries in the development of systematic conservation planning taking into account ICZM, land use / marine use planning and management aspects in the context of MSP
			Regional AP on Sustainable Consumption and Production (SCP)	Para 38	Land use is listed as one of the environmental challenges to be addressed through the proposed actions.
			EcAp Implementation Roadmap	Annex II Ecological Objectives - 8 Coastal Ecosystems and Landscapes	The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved. One of the indicators identified for this objective is the change of land use.
	S3	A5.3 (Agriculture)	SPA/BD Protocol	Art. 3	Parties shall take all the necessary measures to protect, preserve and manage areas of particular natural or cultural value and threatened or endangered species of flora and fauna in a sustainable and environmentally sound way. Therefore, these measures need to be taken with respect to agriculture as well.
				Art. 6	Protection measures shall be taken, in particular regulating or prohibiting any activity related to the exploration or modification of the soil or the exploitation of the subsoil of the land part, the seabed or its subsoil.
				Art. 17	In a planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated through the environmental impact assessment.
			LBS Protocol and its amendments	Art. 5	Parties shall elaborate and implement national and regional action plans and programmes to eliminate pollution deriving from land-based sources and activities, in particular to phase out substances that are toxic, persistent and liable to bioaccumulation.
				Annex 1	Agriculture is listed among the sectors of activity to be primarily considered when setting the priorities for the preparation of action plans, programmes and measures.
			Hazardous Wastes Protocol	Art. 8 Annex I Annex III	Regional cooperation to ensure that clean production methods are applied to production processes. Among the categories of waste subject to this Protocol: waste from the production, formulation and use of biocides and phytopharmaceuticals in agriculture including land treatment.
			ICZM Protocol	Art. 8	Parties shall endeavour to ensure the sustainable use and management of coastal zones in order to preserve the coastal natural habitats, landscapes, natural resources and ecosystems.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
				Art. 9 – 1. (b)	Parties shall ensure that the various economic activities minimise the use of natural resources and take into account the needs of future generations.
				Art. 9 – 2. (a)	Parties have to guarantee a high level of protection of the environment in the location and operation of agricultural and industrial activities so as to preserve coastal ecosystems and landscapes and prevent the pollution of the sea, water, air and soil.
			Mediterranean Strategy for Sustainable Development 2016-2025	Objective 2	Promoting resource management, food production and food security through sustainable forms of rural development.
				Strategic Direction 2.5 – Action 2.5.3.	Develop and strengthen agriculture based on agro-ecological and organic technologies, including organic, labelled and conservation agricultures, controlling and limiting the use of genetically modified organisms.
			Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED)	Chapter 3	Parties undertake to eliminate pollution deriving from land-based sources and activities, in particular to phase out inputs of substances that are toxic, persistent and liable to bioaccumulate.
				Chapter 5.3	Referring to the alteration of seafloors (among others), 2 specific targets are listed: ▪ to safeguard the ecosystem function, maintain the integrity and biological diversity of species and habitats. ▪ where practicable, to restore marine and coastal habitats that have been adversely affected by anthropogenic activities.
				Chapter 5.2.5.	Provides specific targets and actions for (intensive) agriculture in relation to nutrient load.
			Post-2020 SAPBIO	Target 1.3	Focused on pollution control, particularly plastics, nutrient leakage and noise ("By 2030, all types of pollution are prevented, controlled and significantly reduced to levels that are not detrimental to ecosystem function and biodiversity, including through the significant reduction of plastic and nutrient leakage into the environment, and the significant reduction of light and noise pollution and the amounts of biocides used").
				Target 2.2	By 2030, the seafloor integrity is maintained, especially in priority benthic and dark habitats.
			Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas (RFCCA)	Strategic Direction 4.1	Priorities include: vulnerability and interactions of sectors, including agriculture and forestry, as well as water resource management.
			Regional AP on Sustainable Consumption and Production (SCP)	Para 26	Agriculture is one of the priority areas of consumption and production in which the SCP AP aims to achieve, as a first step, a shift to sustainable patterns.
				Operational objectives and actions	Focused also on agriculture, e.g.: adopt good agricultural practices (1.1), develop the policy and legal framework to promote sustainable agriculture (1.2) etc.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Dark Habitats Action Plan	Actions	The introduction of national legislation to reduce negative impacts on dark habitats and associated assemblages (including impact study procedures) is listed among the actions.
			RP on Marine Litter Management in the Mediterranean	Art. 17	Major agricultural stakeholders shall be involved in the implementation of the regional plan and related actions.
			Regional Plans adopted under the LBS Protocol (other than ML Regional Plan)	Focused on the progressive reduction of persistent organic pollutants, on sewage sludge management and on urban wastewater treatment, they include the adoption of emission limit values (e.g. the reuse of reclaimed wastewater for agriculture irrigation).	
			EcAp Implementation Roadmap	Annex II Ecological Objectives	
				5 Eutrophication	Human-induced eutrophication is prevented, especially the adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms and oxygen deficiency in bottom waters.
				6 Seafloor Integrity	Seafloor integrity is maintained, especially in priority benthic habitats.
				8 Coastal Ecosystem and Landscapes	The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved.
		A1.1 (Land take for urban industrial and agricultural uses)	SPA/BD Protocol	Art. 3	Parties shall take all the necessary measures to protect, preserve and manage areas of particular natural or cultural value and threatened or endangered species of flora and fauna in a sustainable and environmentally sound way. Therefore, these measures need to be taken with respect to land take for agricultural uses as well.
				Art. 6	Protection measures shall be taken, in particular regulating or prohibiting any activity related to the exploration or modification of the soil or the exploitation of the subsoil of the land part, the seabed or its subsoil.
				Art. 17	In a planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated through the environmental impact assessment.
			LBS Protocol and its amendments	Art. 7	Parties shall formulate and adopt common guidelines and standards dealing with the control and progressive replacement of products, installations, industrial and other processes causing pollution of the marine environment.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			ICZM Protocol	Art. 6	General principles of ICZM and in particular: f) The formulation of land use strategies, plans and programmes covering urban development and socio-economic activities; h) The allocation of uses throughout the entire coastal zone should be balanced, and unnecessary concentration and urban sprawl should be avoided.
				Art. 8	Parties shall endeavour to ensure the sustainable use and management of coastal zones in order to preserve the coastal natural habitats, landscapes, natural resources and ecosystems.
				Art. 9 – 1. (b)	Parties shall ensure that the various economic activities minimise the use of natural resources and take into account the needs of future generations.
				Art. 9 – 2. (a)	Parties have to guarantee a high level of protection of the environment in the location and operation of agricultural and industrial activities so as to preserve coastal ecosystems and landscapes and prevent the pollution of the sea, water, air and soil.
				Art. 20	Land Policy: Parties shall adopt appropriate land policy instruments and measures, including the process of planning. To this end, and in order to ensure the sustainable management of public and private land of the coastal zones, Parties may inter alia adopt mechanisms for the acquisition, cession, donation or transfer of land to the public domain and institute easements on properties.
			Mediterranean Strategy for Sustainable Development 2016-2025	Objective 2 Strategic Direction 2.1 Action 2.1.8	Develop action plans for the restoration of land from extractive activities.
				Objective 3 Strategic direction 3.1 Action 3.1.1	Utilise spatial planning systems to ensure balanced development in urban areas that incorporate measures for infrastructure provision, and land take reduction where possible.
			Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED)	Chapter 5.3	Referring to the alteration of seafloors (among others), 2 specific targets are listed: ▪ to safeguard the ecosystem function, maintain the integrity and biological diversity of species and habitats. ▪ where practicable, to restore marine and coastal habitats that have been adversely affected by anthropogenic activities.
			Post-2020 SAP BIO	Annex III Actions Table	11. Spatial Planning Support for countries in the development of systematic conservation planning taking into account ICZM, land use / marine use planning and management aspects in the context of MSP.
				Target 2.2	By 2030, the seafloor integrity is maintained, especially in priority benthic and dark habitats.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Regional AP on Sustainable Consumption and Production (SCP)	Para 38	Land use is listed as one of the environmental challenges to be addressed through the proposed actions.
			Dark Habitats Action Plan	Actions	The introduction of national legislation to reduce negative impacts on dark habitats and associated assemblages (including impact study procedures) is listed among the actions.
			EcAp Implementation Roadmap	Annex II Ecological Objectives	
				6 Seafloor Integrity	Seafloor integrity is maintained, especially in priority benthic habitats.
				8 Coastal Ecosystem and Landscapes	The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved. One of the indicators identified for this objective is the change of land use.
	S4	A5.3 (Agriculture)	SPA/BD Protocol	Art. 3	Parties shall take all the necessary measures to protect, preserve and manage areas of particular natural or cultural value and threatened or endangered species of flora and fauna in a sustainable and environmentally sound way. Therefore, these measures need to be taken with respect to agriculture as well.
				Art. 6	Protection measures shall be taken, in particular regulating or prohibiting any activity related to the exploration or modification of the soil or the exploitation of the subsoil of the land part, the seabed or its subsoil.
				Art. 17	In a planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated through the environmental impact assessment.
			LBS Protocol and its amendments	Art. 5	Parties shall elaborate and implement national and regional action plans and programmes to eliminate pollution deriving from land-based sources and activities, in particular to phase out substances that are toxic, persistent and liable to bioaccumulation.
				Annex 1	Agriculture is listed among the sectors of activity to be primarily considered when setting the priorities for the preparation of action plans, programmes and measures.
			Hazardous Wastes Protocol	Art. 8 Annex I Annex III	Regional cooperation to ensure that clean production methods are applied to production processes. Among the categories of waste subject to this Protocol: waste from the production, formulation and use of biocides and phytopharmaceuticals in agriculture including land treatment.
			ICZM Protocol	Art. 5	One of the objectives of the ICZM Protocol is to ensure the preservation of the integrity of coastal ecosystems, landscapes and geomorphology.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
				Art. 8	Parties shall endeavour to ensure the sustainable use and management of coastal zones in order to preserve the coastal natural habitats, landscapes, natural resources and ecosystems.
				Art. 9 – 1. (b)	Parties shall ensure that the various economic activities minimise the use of natural resources and take into account the needs of future generations.
				Art. 9 – 2. (a)	Parties have to guarantee a high level of protection of the environment in the location and operation of agricultural and industrial activities so as to preserve coastal ecosystems and landscapes and prevent the pollution of the sea, water, air and soil.
				Art. 10-11	Parties have to take measures to protect the characteristics of certain specific coastal ecosystems and to ensure the protection of coastal landscapes.
			Mediterranean Strategy for Sustainable Development 2016-2025	Objective 2	Promoting resource management, food production and food security through sustainable forms of rural development.
				Strategic Direction 2.5 - Action 2.5.3.	Develop and strengthen agriculture based on agro-ecological and organic technologies, including organic, labelled and conservation agricultures, controlling and limiting the use of genetically modified organisms.
			Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED)	Chapter 3	Parties undertake to eliminate pollution deriving from land-based sources and activities, in particular to phase out inputs of substances that are toxic, persistent and liable to bioaccumulate.
				Chapter 5.2.5.	Provides specific targets and actions for (intensive) agriculture in relation to nutrient load.
				Chapter 5.3	Referring to physical alterations of coastal areas and wetlands (among others), 2 specific targets are listed: ▪ to safeguard the ecosystem function, maintain the integrity and biological diversity of species and habitats. ▪ where practicable, to restore marine and coastal habitats that have been adversely affected by anthropogenic activities.
			Post-2020 SAPBIO	Target 1.3	Focused on pollution control, particularly plastics, nutrient leakage and noise.
				Action 12 (Restoration)	Support the restoration of ecosystems providing key services, those degraded and expected to become increasingly critical in a changing climate, such as wetlands and shallow seashore habitats among others.
			Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas (RFCCA)	Strategic Direction 4.1	Priorities include: vulnerability and interactions of sectors, including agriculture and forestry, as well as water resource management.
				Para 26	Agriculture is one of the priority areas of consumption and production in which the SCP AP aims to achieve, as a first step, a shift to sustainable patterns.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Regional AP on Sustainable Consumption and Production (SCP)	Operational objectives and actions	Focused also on agriculture, e.g.: adopt good agricultural practices (1.1), develop the policy and legal framework to promote sustainable agriculture (1.2) etc.
			RP on Marine Litter Management in the Mediterranean	Art. 17	Major agricultural stakeholders shall be involved in the implementation of the regional plan and related actions.
			Regional Plans adopted under the LBS Protocol (other than ML Regional Plan)	Focused on the progressive reduction of persistent organic pollutants, on sewage sludge management and on urban wastewater treatment, they include the adoption of emission limit values (e.g. the reuse of reclaimed wastewater for agriculture irrigation).	
			EcAp Implementation Roadmap	Annex II Ecological Objectives	
				5 Eutrophication	Human-induced eutrophication is prevented, especially the adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms and oxygen deficiency in bottom waters.
				8 Coastal Ecosystem and Landscapes	The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved.
		A1.1 (Land take for urban industrial and agricultural uses)	SPA/BD Protocol	Art. 3	Parties shall take all the necessary measures to protect, preserve and manage areas of particular natural or cultural value and threatened or endangered species of flora and fauna in a sustainable and environmentally sound way. Therefore, these measures need to be taken with respect to land take for agricultural uses as well.
				Art. 6	Protection measures shall be taken, in particular regulating or prohibiting any activity related to the exploration or modification of the soil or the exploitation of the subsoil of the land part, the seabed or its subsoil.
				Art. 17	In a planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated through the **environmental impact assessment**.
			LBS Protocol and its amendments	Art. 7	Parties shall formulate and adopt common guidelines and standards dealing with: ▪ the length, depth and position of pipelines for coastal outfalls ▪ the control and progressive replacement of products, installations, industrial and other processes causing pollution of the marine environment.
			ICZM Protocol	Art. 5	One of the objectives of the ICZM Protocol is to ensure the preservation of the integrity of coastal ecosystems, landscapes and geomorphology.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
				Art. 6	General principles of ICZM and in particular: f) The formulation of land use strategies, plans and programmes covering urban development and socio-economic activities; h) The allocation of uses throughout the entire coastal zone should be balanced, and unnecessary concentration and urban sprawl should be avoided.
				Art. 8	Parties shall endeavour to ensure the sustainable use and management of coastal zones in order to preserve the coastal natural habitats, landscapes, natural resources and ecosystems.
				Art. 9 – 1. (b)	Parties shall ensure that the various economic activities minimise the use of natural resources and take into account the needs of future generations.
				Art. 9 – 2. (a)	Parties have to guarantee a high level of protection of the environment in the location and operation of agricultural and industrial activities so as to preserve coastal ecosystems and landscapes and prevent the pollution of the sea, water, air and soil.
				Art. 20	Land Policy: Parties shall adopt appropriate land policy instruments and measures, including the process of planning. To this end, and in order to ensure the sustainable management of public and private land of the coastal zones, Parties may inter alia adopt mechanisms for the acquisition, cession, donation or transfer of land to the public domain and institute easements on properties.
			Mediterranean Strategy for Sustainable Development 2016-2025	Objective 2 Strategic Direction 2.1 Action 2.1.8	Develop action plans for the restoration of land from extractive activities.
				Obj. 3 Strategic direction 3.1 Action 3.1.1	Utilise spatial planning systems to ensure balanced development in urban areas that incorporate measures for infrastructure provision, and land take reduction where possible.
			Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED)	Chapter 5.3	Referring to physical alterations of coastal areas and wetlands (among others), 2 specific targets are listed: ▪ to safeguard the ecosystem function, maintain the integrity and biological diversity of species and habitats. ▪ where practicable, to restore marine and coastal habitats that have been adversely affected by anthropogenic activities.
			Post-2020 SAP BIO	Annex III Actions Table	11. Spatial Planning Support for countries in the development of systematic conservation planning taking into account ICZM, land use / marine use planning and management aspects in the context of MSP.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
				Action 12 (Restoration)	Support the restoration of ecosystems providing key services, those degraded and expected to become increasingly critical in a changing climate, such as **wetlands** and shallow seashore habitats among others.
			Regional AP on Sustainable Consumption and Production (SCP)	Para 38	Land use is listed as one of the environmental challenges to be addressed through the proposed actions.
			EcAp Implementation Roadmap	Annex II Ecological Objectives	
				8 Coastal Ecosystem and Landscapes	The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved. One of the indicators identified for this objective is the **change of land use**.
IN	S1	A6.2 (Transport - shipping)	Prevention and Emergency Protocol	Article 3 General Provisions	The whole Protocol includes provisions relevant for the interaction S1-A6.2 as Parties shall cooperate: (a) to implement international regulations to prevent, reduce and control the pollution of the marine environment from ships; and (b) to take all necessary measures in cases of pollution incidents.
			Dumping Protocol	Articles 4 and 5	Dumping of waste and other matter from ships and aircraft is prohibited with the exception of those in art. 4.2. Their dumping requires a special permit.
			SPA/BD Protocol	Article 3	Even with respect to shipping, all the necessary measures shall be taken to protect, preserve and manage threatened or endangered species of flora and fauna, as well as areas of particular natural or cultural value, in a sustainable and environmentally sound way.
			Post-2020 SAPBIO	Annex 3 Action Table – Action 26	Integrating biodiversity – Expected result: In most Mediterranean countries, biodiversity conservation is mainstreamed in the strategies and planning processes of MSP, including fisheries, aquaculture, agriculture, coastal tourism, ports, maritime transportation, education, and also in EIA/SEA frameworks.
			Mediterranean Strategy for the Prevention of, Preparedness for and Response to Marine Pollution from Ships (2022-2031)	Common Strategic Objectives 1-3-4- 5 -6	Prevent, prepare for and respond to operational, illegal and accidental oil and HNS pollution from ships; Reduce and monitor air emissions from ships to a level that is not harmful to the marine environment; Prevent and reduce litter (in particular plastic) entering the marine environment from ships; Eliminate the introduction of non-indigenous species through shipping activities; Achieve a well-managed safe and pollution-free Mediterranean, with integrated marine spatial planning and the designation of special areas, where shipping activity has a limited impact upon the marine environment.
			Ballast Water Management Strategy for the Mediterranean Sea (2022-2027)	Overall objectives	To establish a framework for a regional harmonised approach in the Mediterranean on ships' ballast water control and management and to initiate some preliminary activities related to the management of ships' biofouling in the Mediterranean region. As a consequence, actions and activities are all relevant for the selected interaction.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			AP for the Conservation of Cetaceans in the Mediterranean Sea	Priority actions VIII.4.2 and VIII 4.5	Measures to reduce ship strikes with large whales and to prevent the detrimental effects of underwater noise on cetaceans (produced by shipping routes) should be put in place.
			Regional Plan on Marine Litter	Art. 17	Major maritime sector stakeholders shall be involved in the implementation of the regional plan and related actions.
			Mediterranean Strategy for the Prevention of, Preparedness for and Response to Marine Pollution from Ships (2022-2031)	Common Strategic Objective 4	Commercial fishing is recognised as a sea-based source of marine plastic litter, particularly derelict fishing gear.
				Action 4.6.4	To explore and implement (to the extent possible) ways and means to charge reasonable costs for the use of port reception facilities or, when applicable, apply a 'No-Special-Fee' system (including provisions for passively fished waste and the right of delivery).
				Action 4.7.4.	To carry out FSI (Flag States Implementation) inspections to ensure that registered vessels, including pleasure craft and fishing boats, comply with the MARPOL Annex V requirements and any other national rules and regulations.
				Action 4.8.4.	To provide for separate garbage collection for plastic waste from ships, including fishing gear.
				Action 4.8.5.	To provide assistance to CPs to effectively manage marine litter accidentally collected during fishing activities (the so-called "Fishing for Litter"), as well as damaged fishing gear, providing assistance to realise adequate port reception facilities and cooperation within stakeholders.
		A4.1 (Fish and shellfish harvesting)	SPA/BD Protocol	Art. 3	Even with respect to fishing and related activities, all the necessary measures shall be taken to protect, preserve and manage threatened or endangered species of flora and fauna, as well as areas of particular natural or cultural value, in a sustainable and environmentally sound way.
			Dumping Protocol	Art. 4 and 5	Dumping of waste and other matter from ships and aircraft is prohibited with the exception of those in Article 4.2, which include fish waste and organic materials resulting from the processing of fish and other marine organisms. Their dumping requires a special permit.
				Annex	Possible effects on marine life, fish and shellfish culture, fish stocks and fisheries are listed among the factors to be considered when establishing criteria governing the issue of permits.
			ICZM Protocol	Article 9	The Parties agree to ensure that fishing practices are compatible with the sustainable use of natural marine resources. Moreover, they agree to regulate or, where necessary, prohibit the practice of various sporting and recreational activities, including recreational fishing and shellfish extraction.
				Action 1.2.5.	Safeguard the Mediterranean fisheries by ensuring that all fish stocks are fished sustainably and effectively.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Mediterranean Strategy for Sustainable Development 2016-2025	Target 14.4	By 2020, effectively regulate harvesting and end overfishing, IUU fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce the maximum sustainable yield as determined by their biological characteristics.
			Post-2020 SAP BIO	Goal 1:	
				Target 2.4	By 2027, in all countries, start the implementation of science-based management plans to effectively regulate sustainable harvesting and end overfishing, illegal, unreported and unregulated fishing. By 2030, all ecologically destructive and unsustainable fishing practices have been halted by limiting the use of fishing gear that is most harmful to biodiversity.
				Target 2.5	Promote shared responsibility and strong participatory management practices in professional small-scale fisheries.
					Moreover, specific actions contributing to the above targets are identified.
			Post-2020 Regional Strategy for Marine and Coastal Protected Areas and Other Effective Area-Based Conservation Measures in the Mediterranean	Criteria for the inclusion of SPAs in the Directory of Mediterranean SPAs: II 4.c	The legal framework of the SPA must define relevant protection measures that should include: (i) the regulation or prohibition of fishing.
			Regional AP on Sustainable Consumption and Production (SCP)	Operational objectives 1, 2, 3 and relevant actions	Also focused on fisheries, e.g.: adopt sustainable fishing practices (1.1), life cycle approach in food and fisheries processing (1.1), green financing for sustainable fisheries (1.2), information and education campaigns (1.3).
			AP for the Conservation of Cetaceans in the Mediterranean Sea	Priority actions VIII 3.2 and VIII 4.8	Measures to involve fishers across the Mediterranean sea in Cetacean Conservation Mitigation measures for cetacean bycatch through the management of fisheries.
			Updated AP for the Conservation of Marine Turtles	Action A.3, B.1, C	Fishing regulations (depth, season and gear) in key areas; Modification of gear, methods and strategies; Elaboration and execution of cooperative research projects of regional importance aimed at assessing the interaction between turtles and fisheries; public awareness and information campaigns in particular for fishermen and local populations.
			Updated Action Plan for the Conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea	C. Implementation Measures	Collection of fisheries statistics and data on fishing efforts; permanent monitoring of fisheries where chondrichthyans are impacted; training fisheries officers and managers in the study and conservation of chondrichthyan fish; information campaigns directed at professional fishermen.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Dark Habitats Action Plan	VI Actions required to attain the objectives of the AP	Quantify the proven or potential pressures (e.g. commercial and recreational fishing); setting up Fisheries Restricted Areas (FRA); information and awareness programmes for fishermen.
			RP on Marine Litter	Article 9	Prevention of marine litter - (3e): establishment of deposits, return and restoration system for expandable polystyrene boxes; (6) implement the fishing for litter practice; (7) implement "gear marking to indicate ownership" and "environmentally neutral upon degradation nets and traps" concepts.
				Article 17	Major fisheries stakeholders shall be involved in the implementation of the RP.
			EcAp Implementation Roadmap	Annex II Ecological Objectives – 3 Harvest of Commercially Exploited Fish and Shellfish	Populations of selected commercially exploited fish and shellfish are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock.
	S3	A6.2 (Transport - shipping)	Prevention and Emergency Protocol	Article 3 General Provisions	The whole Protocol includes provisions relevant for interaction S3-A6.2 as Parties shall cooperate: (a) to implement international regulations to prevent, reduce and control the pollution of the marine environment from ships; and (b) to take all necessary measures in cases of pollution incidents.
			Dumping Protocol	Articles 4 and 5	Dumping of waste and other matter from ships and aircraft is prohibited with the exception of those in art. 4.2. Their dumping requires a special permit.
			SPA/BD Protocol	Article 3	Even with respect to shipping, all the necessary measures shall be taken to protect, preserve and manage threatened or endangered species of flora and fauna, as well as areas of particular natural or cultural value, in a sustainable and environmentally sound way.
			ICZM Protocol	Art. 9 – 1. (b)	Parties shall ensure that the various economic activities minimise the use of natural resources and take into account the needs of future generations.
				Art. 9 – 1. (d)	Parties shall ensure that the coastal and maritime economy is adapted to the fragile nature of coastal zones.
				Art. 9 – 2. (g)	Parties agree to conduct maritime activities in such a way as to ensure the preservation of coastal ecosystems in conformity with the rules, standards and procedures of the relevant international conventions.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Mediterranean Strategy for the Prevention of, Preparedness for and Response to Marine Pollution from Ships (2022-2031)	Common Strategic Objectives 1-3-4- 5 -6	Prevent, prepare for and respond to operational, illegal and accidental oil and HNS pollution from ships; Reduce and monitor air emissions from ships to a level that is not harmful to the marine environment; Prevent and reduce litter (in particular plastic) entering the marine environment from ships; Achieve a well-managed safe and pollution-free Mediterranean, with integrated marine spatial planning and the designation of special areas, where shipping activity has a limited impact on the marine environment.
			Ballast Water Management Strategy for the Mediterranean Sea (2022-2027)	Overall objectives	To establish a framework for a regional harmonised approach in the Mediterranean on ships' ballast water control and management and to initiate some preliminary activities related to the management of ships' biofouling in the Mediterranean region. As a consequence, all actions and activities are relevant for the selected interaction.
			Regional Plan on Marine Litter	Art. 17	Major maritime sector stakeholders shall be involved in the implementation of the regional plan and related actions.
			Ecap Implementation Roadmap	Annex II Ecological Objectives	
				6 Seafloor Integrity	Seafloor integrity is maintained, especially in priority benthic habitats.
		A1.2 (Infrastructure related to coastal/watercourse morphology alteration)	SPA/BD Protocol	Art. 3	Parties shall take all the necessary measures to protect, preserve and manage areas of particular natural or cultural value and threatened or endangered species of flora and fauna in a sustainable and environmentally sound way. Therefore, these measures also need to be taken with respect to infrastructure such as dams, canalisation, trenching and ports.
				Art. 6	Protection measures shall be taken, in particular regulating or prohibiting any activity related to the exploration or modification of the soil or the exploitation of the subsoil of the land part, the seabed or its subsoil.
				Art. 17	In a planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated through the environmental impact assessment.
			ICZM Protocol	Art. 5	Objectives of ICZM: ▪ to preserve coastal zones for the benefit of current and future generations; ▪ to ensure the preservation of the integrity of coastal ecosystems, landscapes and geomorphology.
				Art. 6	Most of the general principles of ICZM are relevant for this interaction.
				Art. 8	Parties shall endeavour to ensure the sustainable use and management of coastal zones in order to preserve the natural coastal habitats, landscapes, natural resources and ecosystems.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
				Art. 9 – 1. (b)	Parties shall ensure that the various economic activities minimise the use of natural resources and take into account the needs of future generations.
				Art. 9 – 2. (a)	Parties have to guarantee a high level of protection of the environment in the location and operation of agricultural and industrial activities so as to preserve coastal ecosystems and landscapes and prevent the pollution of the sea, water, air and soil.
				Art. 9 – 2. (f)	Parties agree to subject infrastructure, ports and maritime works and structures to authorisation so that their negative impact on coastal ecosystems, landscapes and geomorphology is minimised.
				Art. 23 - 2	Parties, when considering new activities and works located in the coastal zone including marine structures and coastal defence works, shall take particular account of their negative effects on coastal erosion.
			Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED)	Chapter 5.3	Referring to the alteration of seafloors (among others), 2 specific targets are listed: ▪ to safeguard the ecosystem function, maintain the integrity and biological diversity of species and habitats. ▪ where practicable, to restore marine and coastal habitats that have been adversely affected by anthropogenic activities. The establishment of a system of prior authorisation by competent national authorities for works that cause physical alterations of the natural state of the coastline or the destruction of coastal habitats is listed among the activities at the national level.
			Post-2020 SAPBIO	Target 2.2	By 2030, the seafloor integrity is maintained, especially in priority benthic and dark habitats.
			EcAp Implementation Roadmap	Annex II Ecological Objectives	
				6 Seafloor Integrity	Seafloor integrity is maintained, especially in priority benthic habitats.
				8 Coastal Ecosystem and Landscapes	The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved.

Table 5. Analysis: UNEP/MAP Policy Documents / Selected Interactions – Albania (see Table 2)

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
LW	S2	A5.1 (Marine aquaculture[1])	SPA/BD Protocol	Art. 3	Parties shall take all the necessary measures to protect, preserve and manage areas of particular natural or cultural value and threatened or endangered species of flora and fauna in a sustainable and environmentally sound way. Therefore, these measures also need to be taken with respect to aquaculture.
				Art. 17	In a planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated through the environmental impact assessment.
			ICZM Protocol	Art. 9 – 1. (b)	Parties shall ensure that the various economic activities minimise the use of natural resources and take into account the needs of future generations.
				Art. 9 – 2. (c)	Parties agree: (i) to take into account the need to protect aquaculture and shellfish areas in development projects; (ii) to regulate aquaculture by controlling the use of inputs and waste treatment.
			Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED)	Chapter 5.2.5	Provides specific targets and actions for (intensive) aquaculture in relation to nutrient load.
			Post-2020 SAPBIO	Goal 2	Ensure that biodiversity is preserved and maintained or enhanced in order to meet people's needs.
				Target 2.6	Focused on sustainable and biodiversity-friendly aquaculture.
				ANNEX III Actions Table	Action 24. Aquaculture – Support developing the Post2020 GFCM Aquaculture and Fisheries strategy - transforming the aquaculture industry through science-based solutions and marine spatial planning (MSP) tools.
			RP on Marine Litter Management in the Mediterranean	Art. 17	Major aquaculture stakeholders shall be involved in the implementation of the regional plan and related actions.

[1] A Draft Regional Plan on Aquaculture Management is under development and will be submitted for adoption to the 23rd Meeting of the Contracting Parties (COP23), which will be held in December 2023. The Regional Plan will likely represent the main reference document for aquaculture activity in the frame of the Barcelona Convention system.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			EcAp Implementation Roadmap	Annex II Ecological Objective - 3 Harvest of Commercially Exploited Fish and Shellfish	Populations of selected commercially exploited fish and shellfish are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock
				Objective - 4 Marine Food Webs	Alterations to components of marine food webs caused by resource extraction or human-induced environmental changes do not have long-term adverse effects on food web dynamics and related viability
	S3	A7.1 (Urban uses)	SPA/BD Protocol	Art. 3	Parties shall take all the necessary measures to protect, preserve and manage areas of particular natural or cultural value and threatened or endangered species of flora and fauna in a sustainable and environmentally sound way. Therefore, these measures also need to be taken with respect to urban use.
				Art. 6	Protection measures shall be taken, in particular regulating or prohibiting any activity related to the exploration or modification of the soil or the exploitation of the subsoil of the land part, the seabed or its subsoil.
				Art. 17	In a planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated through the environmental impact assessment.
			Hazardous Wastes Protocol	Article 8	Regional cooperation for clean production methods concerning household waste (Annex I).
			ICZM Protocol	Art. 6	General principles of ICZM and in particular: f) The formulation of land use strategies, plans and programmes covering urban development and socio-economic activities; h) The allocation of uses throughout the entire coastal zone should be balanced, and unnecessary concentration and urban sprawl should be avoided.
				Art. 8 – 1 e 2	To ensure the sustainable use and management of coastal zones, Parties shall establish in coastal zones, from the highest winter waterline, a zone where construction is not allowed or adapting this provision in areas with particular geographical or other local constraints, especially related to population density or social needs, where individual housing, urbanisation or development are provided for by national legal instruments.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
				Art. 8 – 3	Parties shall also endeavour to ensure that their national legal instruments include criteria for the sustainable use of the coastal zone, including identifying and delimiting, outside protected areas, open areas where urban development and other activities are restricted or, where necessary, prohibited.
				Art. 9 – 1. (b)	Parties shall ensure that the various economic activities minimise the use of natural resources and take into account the needs of future generations.
				Art. 20	Land Policy: Parties shall adopt appropriate land policy instruments and measures, including the process of planning. To this end, and in order to ensure the sustainable management of the public and private land of the coastal zones, Parties may inter alia adopt mechanisms for the acquisition, cession, donation or transfer of land to the public domain and institute easements on properties.
			Mediterranean Strategy for Sustainable Development 2016-2025	Objective 3 Strategic Direction 3.1	Planning and managing sustainable Mediterranean cities.
				Action 3.1.1	Utilise spatial planning systems to ensure balanced development in urban areas that incorporate measures for infrastructure provision, and land take reduction where possible.
				Action 3.1.3	Strengthen small and medium-sized towns as focal points for regional development that will reduce population pressures in urban agglomerations, including by ensuring appropriate transport links from major urban centres to medium and small ones.
			Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED)	Chapter 5.1	Focuses on urban environment: (1) municipal sewage, (2) urban solid waste, (3) air pollution.
				Chapter 5.3	Referring to the alteration of seafloors (among others), 2 specific targets are listed: ▪ -to safeguard the ecosystem function, maintain the integrity and biological diversity of species and habitats. ▪ where practicable, to restore marine and coastal habitats that have been adversely affected by anthropogenic activities.
			Post-2020 SAP BIO	Annex III Actions Table	11. Spatial Planning Support for countries in the development of systematic conservation planning taking into account ICZM, land use / marine use planning and management aspects in the context of the MSP.
				Target 2.2	By 2030, the seafloor integrity is maintained, especially in priority benthic and dark habitats.
			Regional Climate Change Adaptation Framework for the	Strategic Direction 1.2	(Promoting adequate institutional and policy frameworks) – Priorities include: risk and impact assessment in relation to climate change prior to major infrastructure investments in coastal and marine areas.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Mediterranean Marine and Coastal Areas (RFCCA)	Strategic Direction 1.5	(Integrating climate adaptation into local plans for the protection and management of areas of special interest) - including coastal mega-cities.
				Strategic Direction 4.1	(Understanding vulnerability) Priorities include: vulnerability and interactions of sectors, including urbanisation.
			Regional AP on Sustainable Consumption and Production (SCP)	Operational objectives 4.1 - 4.2 - 4.3 and actions	Focused on housing and construction, e.g.: sustainable coastal urban development and green construction for the efficient use of resources and protection of ecosystems.
			Regional Plan on Marine Litter	Article 9	Prevention of marine litter - (1): base urban solid waste management on reduction at source, (4) establish urban sewer, wastewater treatment plants and waste management systems to prevent run-off and riverine inputs of litter.
			Regional Plan on Urban Wastewater Treatment	Art. 2-5	Objective, guiding principles and measures on the collection, treatment, reuse and discharge of urban wastewaters and the pre-treatment and discharge of industrial wastewater to protect the coastal and marine environment and human health from the adverse effects of the above-mentioned wastewater direct and or indirect discharges.
			EcAp Implementation Roadmap	Annex II Ecological Objectives	
				6 Seafloor Integrity	Seafloor integrity is maintained, especially in priority benthic habitats.
				8 Coastal Ecosystem and Landscapes	The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved. One of the indicators identified for this objective is the change of land use.
IN	S2	A4.1 (Fish and shelfish harvesting)	SPA/BD Protocol	Art. 3	Even with respect to fishing and related activities, all the necessary measures shall be taken to protect, preserve and manage threatened or endangered species of flora and fauna, as well as areas of particular natural or cultural value, in a sustainable and environmentally sound way.
			Dumping Protocol	Art. 4 and 5	Dumping of waste and other matter from ships and aircraft is prohibited with the exception of those in Article 4.2, which also include fish waste and organic materials resulting from the processing of fish and other marine organisms. Their dumping requires a special permit.
				Annex	Possible effects on marine life, fish and shellfish culture, fish stocks and fisheries are listed among the factors to be considered in establishing criteria governing the issue of permits.
			ICZM Protocol	Article 9	The Parties agree to ensure that fishing practices are compatible with the sustainable use of natural marine resources. Moreover, they agree to regulate or, where necessary, prohibit the practice of various sporting and recreational activities, including recreational fishing and shellfish extraction.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Mediterranean Strategy for Sustainable Development 2016-2025	Action 1.2.5.	Safeguard the Mediterranean fisheries by ensuring that all fish stocks are being fished sustainably and effectively.
				Target 14.4	By 2020, effectively regulate harvesting and end overfishing, IUU fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce the maximum sustainable yield as determined by their biological characteristic.
			Post-2020 SAP BIO	Goal 1:	
				Target 2.4	By 2027, in all countries, start the implementation of science-based management plans to effectively regulate sustainable harvesting and end overfishing, illegal, unreported and unregulated fishing. By 2030, all ecologically destructive and unsustainable fishing practices have been halted by limiting the use of fishing gear that is most harmful to biodiversity.
				Target 2.5	Promote shared responsibility and strong participatory management practices in professional small-scale fisheries.
					Moreover, specific actions contributing to the above targets are identified.
			Post-2020 Regional Strategy for Marine and Coastal Protected Areas and Other Effective Area-Based Conservation Measures in the Mediterranean	Criteria for the inclusion of SPAs in the Directory of Mediterranean SPAs: II 4.c	The legal framework of the SPA must define relevant protection measures that should include: (i) the regulation or prohibition of fishing.
			Regional AP on Sustainable Consumption and Production (SCP)	Operational objectives 1, 2, 3 and relevant actions	Also focused on fisheries, e.g.: adopt sustainable fishing practices (1.1), life cycle approach in food and fisheries processing (1.1), green financing for sustainable fisheries (1.2), information and education campaigns (1.3).
			AP for the Conservation of Cetaceans in the Mediterranean Sea	Priority Actions VIII 3.2 and VIII 4.8	Measures to involve fishers across the Mediterranean sea in Cetacean Conservation. Mitigation measures for cetacean bycatch through the management of fisheries.
			Updated AP for the Conservation of Marine Turtles	Action A.3, B.1, C	Fishing regulations (depth, season and gear) in key areas; Modification of gear, methods and strategies; Elaboration and execution of cooperative research projects of regional importance aimed at assessing the interaction between turtles and fisheries; public awareness and information campaigns in particular for fishermen and local populations.
			Updated Action Plan for the Conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea	C. Implementation Measures	Collection of fisheries statistics and data on fishing efforts; permanent monitoring of fisheries where chondrichthyans are impacted; training fisheries officers and managers in the study and conservation of chondrichthyan fish; information campaigns directed at professional fishermen.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Dark Habitats Action Plan	VI Actions required to attain the objectives of the AP	Quantify the proven or potential pressures (e.g. commercial and recreational fishing); setting up Fisheries Restricted Areas (FRA); information and awareness programmes for fishermen.
			RP on Marine Litter	Article 9	Prevention of marine litter - (3e): establishment of deposits, return and restoration system for expandable polystyrene boxes; (6) implement the fishing for litter practice; (7) implement "gear marking to indicate ownership" and "environmentally neutral upon degradation nets and traps" concepts.
				Article 17	Major fisheries stakeholders shall be involved in the implementation of the RP.
			EcAp Implementation Roadmap	Annex II Ecological Objectives – 3 Harvest of Commercially Exploited Fish and Shellfish	Populations of selected commercially exploited fish and shellfish are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock.
				Objective - 4 Marine Food Webs	Alterations to components of marine food webs caused by resource extraction or human-induced environmental changes do not have long-term adverse effects on food web dynamics and related viability.
	S3	A2.1 (Utilisation of natural resources: extraction/mining of sand, gravel, rocks, minerals)	SPA/BD Protocol	Article 3	Even with respect to the utilisation of natural resources such as sand extraction and mineral mining, all the necessary measures shall be taken to protect, preserve and manage threatened or endangered species of flora and fauna, as well as areas of particular natural or cultural value, in a sustainable and environmentally sound way.
				Art. 17	In a planning process that could significantly affect protected areas, species and their habitats, evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated through the environmental impact assessment.
			ICZM Protocol	Art. 9 – 1. (b)	Parties shall ensure that the various economic activities minimise the use of natural resources and take into account the needs of future generations.
				Art. 9 – 2. (e)	Utilisation of specific natural resources: Parties agree to subject to prior authorisation the excavation and extraction of minerals, to regulate the extraction of sand, or prohibit it where it is likely to adversely affect the equilibrium of coastal ecosystems, to monitor coastal aquifers and dynamic areas of contact or interface between fresh and salt water, which may be adversely affected by the extraction of underground water or by discharges into the natural environment.

ICZM Zone	Status Component	Economic Activities	Relevant Legal and Policy Instruments	Relevant Provisions	Brief Description
			Mediterranean Strategy for Sustainable Development 2016-2025	Objective 2 Strategic Direction 2.1	
				Action 2.1.4.	Put in place participative cross-sectoral resource management strategies to ensure that renewable natural resources are extracted in ways that do not threaten the future use of the resources, and without exceeding their maximum sustainable yield.
				Action 2.1.7.	Ensure that the extraction and management of non-renewable resources are carried out in ways that minimise environmental impacts, and that permitting systems include postextraction restoration.
			Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED)	Chapter 5.3	Referring to the alteration of seafloors (among others), 2 specific targets are listed: ▪ to safeguard the ecosystem function, maintain the integrity and biological diversity of species and habitats. ▪ where practicable, to restore marine and coastal habitats that have been adversely affected by anthropogenic activities.
			Post-2020 SAP BIO	Target 1.1	By 2030, the specific anthropogenic pressures on all habitats and species protected under the SPA/BD Protocol have been minimised, in particular for those whose resilience or survival depends on such actions, including from oil and gas activities and seabed mining, ensuring no deterioration in their conservation trends and status.
				Target 2.2	By 2030, the seafloor integrity is maintained, especially in priority benthic and dark habitats.
			Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas (RFCCA)	Strategic Direction 1.2	(Promoting adequate institutional and policy frameworks) – Priorities include: Integrated approach for the reduction of non-climate related threats that undermine the capacities of communities and ecosystems to adapt to climate change, including sand mining.
			Regional Plan on Marine Litter	Art. 9	Prevention of marine litter - (8): measures to prevent marine littering from dredging activities.
			Ecap Implementation Roadmap	Annex II : Ecological Objectives	
				6 Seafloor Integrity	Seafloor integrity is maintained, especially in priority benthic habitats. The distribution of bottom-impacting activities (e.g. dredging activities, sediment disposal, seabed mining, drilling, marine installations, dumping and anchoring, land reclamation, sand and gravel extraction) is listed among the indicators for this EO.
				8 Coastal Ecosystems and Landscapes	The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved The areal extent of sandy areas subject to physical disturbance (including sand mining) is listed among the indicators for this EO.

Table 6. EU Policy Documents Relevant for Selected Interactions – Italy

Status Component – ICZM Zone	Priority EAs	EU Documents
S1 (Biodiversity) - LW	A5.3 (Agriculture)	EU Habitats Directive EU Biodiversity Strategy for 2030
	A1.1 (Land take for urban industrial and agricultural uses)	EU Habitats Directive EU Biodiversity Strategy for 2030
S3 (Seafloor and coastal integrity) - LW	A5.3 (Agriculture)	EU Habitats Directive EU Marine Strategy Framework Directive
	A1.1 (Land take for urban industrial and agricultural uses)	EU Habitats Directive EU Marine Strategy Framework Directive
S4 (Coastal ecosystems, landscapes, seascape, coastal wetlands, estuaries, coastal forest and wood, dunes) - LW	A5.3 (Agriculture)	EU Habitats Directive EU Water Framework Directive EU MSP Directive
	A1.1 (Land take for urban industrial and agricultural uses)	EU Habitats Directive EU Water Framework Directive EU MSP Directive
S1 (Biodiversity) - IN	A6.2 (Transport – shipping)	EU Biodiversity Strategy for 2030 EU Habitats Directive EU MSP Directive EU Marine Strategy Framework Directive
	A4.1 (Fish and shellfish harvesting)	EU Habitats Directive EU Biodiversity Strategy for 2030 Common fisheries policy (CFP): ▪ Action plan: Protecting and restoring marine ecosystems for sustainable and resilient fisheries ▪ Implementation of Regulation (EU) No 1379/2013 on the common organisation of the markets in fishery and aquaculture products EU MSP Directive EU Marine Strategy Framework Directive
S3 (Seafloor and coastal integrity) - IN	A6.2 (Transport - shipping)	EU Habitats Directive EU Marine Strategy Framework Directive EU MSP Directive
	A1.2 (Infrastructure related to coastal/watercourse morphology alteration (dams, canalisation, trenching, ports)	EU Habitats Directive EU Marine Strategy Framework Directive EU MSP Directive

Table 7. EU Policy Documents Relevant for Selected Interactions – Albania

Status Component – ICZM Zone	Priority EAs	EU documents
S2 (Marine and coastal food webs and fish stocks) - LW	A5.1 (Marine aquaculture)	EU Marine Strategy Framework Directive EU Habitats Directive EU MSP Directive Strategic Guidelines for a More Sustainable and Competitive EU Aquaculture for the 2021 to 2030 Period Common fisheries policy (CFP): ▪ Implementation of Regulation (EU) No 1379/2013 on the Common Organisation of the Markets in Fishery and Aquaculture Products.
S3 (Seafloor and coastal integrity) - LW	A7.1 (Urban uses)	EU Habitats Directive EU Marine Strategy Framework Directive
S2 (Marine and coastal food webs and fish stocks) - IN	A4.1 (Fish and shellfish harvesting)	EU Habitats Directive EU Marine Strategy Framework Directive EU MSP Directive Common fisheries policy (CFP): ▪ Action plan: Protecting and restoring marine ecosystems for sustainable and resilient fisheries ▪ Implementation of Regulation (EU) No 1379/2013 on the common organisation of the markets in fishery and aquaculture products
S3 (Seafloor and coastal integrity) - IN	A2.1 (Utilisation of natural resources: extraction/mining of sand, gravel, rocks, minerals)	EU Habitats Directive EU Marine Strategy Framework Directive EU MSP Directive

Conclusions

From the analysis of the regulatory provisions of the UNEP/MAP system documents, despite numerous objectives, measures and recommendations that are relevant to the selected interactions, to the status component, or to economic activity considered from the perspective of the interaction, it would seem that there are no corresponding prescriptions obliging Contracting Parties to implement policies aimed at reducing the impacts caused by the economic activities in question. Moreover, most provisions do not contain specific technical elements related to the selected interactions but have a general cross-cutting profile and can be applicable to different contexts. On the one hand, this constitutes an added value since their scope of application is broader, but on the other hand, it implies a deficiency in terms of focus on the selected interactions and often even on the economic activity related to the specific status component. One example among many is Article 3 of the SPA/BD Protocol, which establishes that "Parties shall take all the necessary measures to protect, preserve and manage areas of particular natural or cultural value and threatened or endangered species of flora and fauna in a sustainable and environmentally sound way". This provision has been reported for all the selected interactions, both for Italy and Albania, as it is extremely generic and may be ascribed to all Status components and economic activities. However, in providing that Parties adopt adequate protection and management measures, the Protocol does not specify what these measures should be and therefore does not provide for a specific reference in terms of legally binding regulatory interventions.

The economic activity for which regulatory provisions within the UNEP/MAP system seem most deficient is undoubtedly aquaculture. However, a specific Regional Management Plan for aquaculture is being finalised and will be submitted for adoption to the Conference of the Parties to be held in December 2023. Also, at the EU level, aquaculture, while being one of the activities falling within the scope of the Maritime Spatial Planning Directive, benefits from a specific policy document, although not binding, namely the Strategic Guidelines for a More Sustainable and Competitive EU Aquaculture for the 2021 to 2030 Period.

Conversely, interactions involving agricultural activity benefit from a wide range of regulatory references, especially in terms of measures aimed at reducing persistent organic pollutants, sewage sludge management, and urban wastewater treatment, including the adoption of emission limit values.

Obviously, and generally speaking, Action Plans related to a specific interaction or status component include more specific regulatory provisions that can be easily transformed into binding prescriptions. Conversely, Roadmaps, Frameworks or Strategies, not binding in themselves, include more generic and strategic formulations that need to be translated into operational and regulatory terms.

Finally, another element of interest emerging from the above analysis is the multiplicity of instruments and documents within the UNEP/MAP system. While ensuring good coverage in terms of regulatory provisions aimed at protecting status components, this variety risks outlining a reference framework that is too broad and, to a certain extent, scattered. As a consequence, individual elements cannot always be traced back to a homogeneous, coherent and effective overall vision.

Annex 3:
Operational Recommendations to Address the Negative Interactions, Thus Contributing Towards Implementing the CRF on ICZM

Process of Identification of Operational Recommendations

Based on the results of Tasks 1 and 2, Task 3 proposes a process for the identification of operational recommendations to implement the CRF on ICZM towards the achievement of EcAp EOs. The recommendations were elaborated starting from the prioritised interactions among elements of the ICZM Protocol and the EcAp EOs, which were detailed in Task 1.

In alignment with the Common Regional Framework (CRF), Operational recommendations are developed for each priority interaction and related to the first two main objectives of the CRF on ICZM (provided the third objective on 'good governance' is cross-cutting the two others):

- Ensure the sustainable development and integrity of the coastal zone, its ecosystems and related services and landscapes, in such a way as to:
  1. address the process through which relevant sectors can ensure the sustainable use of natural resources; and
  2. improve the protection of coastal and marine ecosystems and the preservation of related ecosystem services.
- Address natural hazards and the effects of natural disasters – in particular coastal erosion and other climate-related impacts – thus contributing to reducing, as much as possible, the risk factors that can prevent the achievement of the EcAp EOs.

Operational Recommendations Addressing Priority Interactions

The development of operational recommendations draws on the synthesis results identified in the conclusions of Task 1 concerning the application of the EIAT environmental analysis methodology, and of Task 2 relating to the analysis of the provisions of the main relevant documents part of the UNEP/MAP Barcelona Convention System. In analogy with the indication provided with the CRF, operational recommendations can be different and are expected to focus on assessment, management and governance aspects. Once identified, operational recommendations have been organised in the common template provided by the CRF: Table 1 for Italy and Table 2 for Albania.

The template is organised as follows:

- the first three columns identify the priority interactions for which operational recommendations have been developed, in terms of the interconnected significant causal links among status alteration, economic activities and environmental pressures.
- the fourth column contains the operational recommendations.
- the fifth column proposes progress indicators to monitor the implementation of each operational recommendation.
- the sixth and seventh columns indicate the main objective of the CRF for ICZM that the proposed recommendation is related to: either of the two or even both can be selected.
- the last column is used to specify the aspects covered by the identified operational recommendations: assessment (A), management (M) and/or governance (GO).

As expressly mentioned in the CRF on ICZM main document, it is well-known and commonly acknowledged that coordination, integration (across vertical levels of governance and horizontally among different sectors) and stakeholder participation are essential components of the ICZM process.

Table 1. Identification of the operational recommendations for the project area within Italy

Priority Interaction					Objective of the CRF for ICZM		
Status Component (EOs)	Economic Activity (ICZM elements)	Pressures (EOs)	Operational Recommendations	Progress Indicators	Sustainable Development and Integrity of the Coastal Zone	Addressing Natural Hazards and Disasters	Nature of the Recommendation
S1 (Biodiversity) – Landward-LW	A5.3 (Agriculture) A1.1 (Land take for urban industrial and agricultural uses)	P1.1 – Physical damage/disturbance and morphological alteration of the substrate, seabed, coast, land and coastline, including erosion/accretion P4.5 - Cultivation/artificialisation of natural habitats	Adoption of Sustainable Agricultural Practices: To reduce the negative impact of agriculture on the environment, it is recommended to adopt sustainable agricultural practices. This includes avoiding intensive agriculture and large-scale monoculture, the use of organic farming techniques, conservation of local varieties, and efficient water resource management. These practices will help to preserve local biodiversity, improve soil and ecosystem health, and contribute to the long-term sustainability of the agricultural sector.	Percentage of Farms Adopting Organic Practices: Measures the proportion of farms in the LW area that have converted or are converting to organic farming practices. Diversity of Conserved Local Species: Monitors the number and variety of local species conserved in agricultural areas, indicating a positive impact of sustainable farming practices on biodiversity. Efficiency in Water Resource Use: Assesses the percentual reduction in annual (or monthly) water usage per unit of agricultural production.	Yes	No	Management and Governance
			Strengthening the Monitoring Systems in the Agricultural Sector: Enhancing the monitoring systems to assess the pressure exerted by agriculture and land use on the environment is crucial. The establishment of precautionary thresholds is suggested to enable public decision-makers to monitor environmental trends and adopt plans and strategies aimed at reducing significant environmental pressures. This also includes monitoring pressures from urbanisation and agricultural expansion, to ensure a balanced approach to land management.	Number of Monitoring Systems Implemented: Measures the number of new environmental monitoring systems installed and operational in the LW area. Frequency and Quality of Environmental Reports: Assesses the regularity and comprehensiveness of environmental reports generated, providing information on the effectiveness of the monitoring system.	Yes	Yes	Assessment, Management and Governance

Status Component (EOs)	Priority Interaction: Economic Activity (ICZM elements)	Priority Interaction: Pressures (EOs)	Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM: Sustainable Development and Integrity of the Coastal Zone	Objective of the CRF for ICZM: Addressing Natural Hazards and Disasters	Nature of the Recommendation
			Integrated Planning and Management of Land: The development of integrated land planning and management models that aim for a balance between urban development, agricultural activities, biodiversity conservation and sustainable land use is recommended. An integrated approach is essential to mitigate the overall impacts of human activities on the environment and promote the responsible and sustainable use of local resources.	Number of Integrated Management Initiatives Implemented: Counts the specific initiatives started to promote integrated land management in the LW area. Number of Communication Initiatives (Meetings, Surveys, etc.) Implemented to Ensure Participation and Collect Feedback from Local Communities: Measures the level of involvement of the local communities in land management decisions and their perception of the effectiveness of such decisions.	Yes	Yes	Management and Governance
S3 (Seafloor and coastal integrity) – Landward	A5.3 (Agriculture) A1.1 (Land take for urban industrial and agricultural uses)	P1.1 – Physical damage/disturbance and morphological alteration of the substrate, seabed, coast, land and coastline, including erosion/accretion P4.5 - Cultivation/artificialisation of natural habitats	Regulation and Sustainable Management of Land Use: Implement stricter local regulations for land use, especially in coastal areas, to control and reduce the impact of urbanisation and industrial development. This can include limitations on the conversion of natural land and the incentivisation of sustainable building techniques. Promote integrated spatial planning that considers the combined impact of urban, industrial and agricultural land use in coastal ecosystems.	Number of Sustainable Urban Development Plans Adopted: Measures the number of urban development plans implemented that incorporate environmental sustainability criteria. Percentage of Area of Natural Land Preserved or Restored: Quantifies the area of natural land that has been preserved or restored following the new land use policies. Percentage of Projects Compliant with New Land Use Regulations: Assesses the percentage of urban and industrial development projects that comply with new environmental regulations.	Yes	No	Management and Governance

Status Component (EOs)	Priority Interaction		Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM		Nature of the Recommendation
	Economic Activity (ICZM elements)	Pressures (EOs)			Sustainable Development and Integrity of the Coastal Zone	Addressing Natural Hazards and Disasters	
			Incentivisation of Sustainable Agriculture: Develop incentives and support for farmers who adopt sustainable practices, such as organic farming, soil erosion control and water conservation. Create training and awareness programmes for farmers about the environmental impact of their practices and sustainable alternatives.	Number of Local Regulations/Initiatives to Ensure Incentives and Support for Farmers Adopted: Measures the number of initiatives to ensure incentives and support for farmers for the adoption of sustainable practices. Percentage of Farms Adopting Sustainable Practices: Measures the number of farms that have adopted sustainable practices such as organic farming or soil erosion control. Reduction in the Use of Pesticides and Fertilisers: Indicates the percentage reduction in the use of pesticides and fertilisers in agricultural practices in the region. Increase in Agricultural Areas with Sustainable Water Management: Evaluates the increase in agricultural areas implementing efficient water resource management techniques.	Yes	Yes	Management

Status Component (EOs)	Priority Interaction: Economic Activity (ICZM elements)	Priority Interaction: Pressures (EOs)	Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM: Sustainable Development and Integrity of the Coastal Zone	Objective of the CRF for ICZM: Addressing Natural Hazards and Disasters	Nature of the Recommendation
			Enhancement of Environmental Monitoring and Assessment: Establish a robust environmental monitoring system that assesses the impact of economic activities on coastal ecosystems, with particular attention to the morphology of the substrate and erosion/accretion. Use the results of this monitoring to guide policy decisions and environmental management strategies at all levels.	**Number of Environmental Monitoring Systems Implemented:** Measures the number of new environmental monitoring systems installed and operational. **Frequency of Environmental Reports Produced:** Assesses the regularity and comprehensiveness of environmental reports generated from the monitoring activities. **Number of Newly Implemented Policy Decisions and their Adherence to Addressing Issues Emerging from Monitoring Campaigns:** Assesses the effectiveness of the execution of the recommendation. **Effectiveness of Management Strategies Based on Monitoring Data:** Evaluates the impact of policy decisions and environmental management strategies informed by the monitoring data.	Yes	No	Assessment and Management
S4 (Coastal ecosystems, landscapes, seascape, coastal wetlands, estuaries, coastal forests and woods, dunes) – Landward	A5.3 (Agriculture) A1.1 (Land take for urban industrial and agricultural uses)	P1.1 – Physical damage/disturbance and morphological alteration of the substrate, seabed, coast, land and coastline, including erosion/accretion P4.5 - Cultivation/artificialisation of natural habitats	**Integrated and Sustainable Land Use Management:** Adopt an integrated approach in land use planning and management that balances urban and agricultural needs with the conservation of coastal ecosystems. This can include ecological buffer zones between urban/agricultural areas and sensitive coastal zones. Implement control measures to limit urban and industrial expansion in sensitive coastal areas, thereby reducing morphological alteration and habitat loss.	**Percentage of Coastal Areas Subject to New Land Use Regulations:** Measures the proportion of coastal areas that have been included in the new regulations to limit urban, industrial and intensive agricultural expansion. **Number of Urban and Industrial and Intensive Agricultural Development Projects Compliant with the New Environmental Policies:** Evaluates how many new projects adhere to the environmental sustainability guidelines in coastal zones.	Yes	Yes	Management

Status Component (EOs)	Priority Interaction		Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM		Nature of the Recommendation
	Economic Activity (ICZM elements)	Pressures (EOs)			Sustainable Development and Integrity of the Coastal Zone	Addressing Natural Hazards and Disasters	
			Reduction of Agriculture's Environmental Impact: Promote agricultural techniques that reduce soil erosion and loss of natural habitats, such as conservative farming and crop rotation. Encourage the use of agricultural practices that limit pollution from fertilisers and pesticides, which can harm coastal ecosystems and adjacent waters.	**Number of Farms Adopting Sustainable Practices:** Counts the farms that have implemented practices such as conservative or organic agriculture.	Yes	No	Management
			Enhancement of Environmental Impact Monitoring and Assessment: Establish advanced monitoring systems to assess the impact of urban and agricultural activities on coastal ecosystems, with particular attention to morphological changes and erosion. Integrate the monitoring results into policy decisions, ensuring that land management strategies are informed and guided by reliable scientific data.	**Number of Environmental Monitoring Stations Installed in Coastal Areas:** Counts the new environmental monitoring stations operational in coastal areas. **Frequency and Completeness of Environmental Reports Produced:** Assesses the regularity and comprehensiveness of the reports documenting the impacts of economic activities on coastal zones.	Yes	Yes	Assessment
			Development of Environmental Conservation and Restoration Strategies: Develop and implement specific strategies for the restoration of damaged coastal habitats, including reforestation and wetland restoration activities. Promote the active conservation of dunes and other coastal ecosystems through targeted management measures and conservation projects.	**Extent of Coastal Areas Undergoing Restoration and Conservation Interventions:** Measures the total area of the coastal zones undergoing restoration or conservation projects. **Number of Completed or Ongoing Natural Habitat Restoration Initiatives:** Evaluates the number of active or completed projects for the restoration of natural habitats like coastal forests, dunes and wetlands.	Yes	Yes	Management and Governance

Priority Interaction					Objective of the CRF for ICZM		
Status Component (EOs)	Economic Activity (ICZM elements)	Pressures (EOs)	Operational Recommendations	Progress Indicators	Sustainable Development and Integrity of the Coastal Zone	Addressing Natural Hazards and Disasters	Nature of the Recommendation
S1 (Biodiversity) – Interface	A6.2 (Transport – shipping) A4.1 (Fish and shellfish harvesting)	P4.1 – Transfer of native species, introduction/diffusion of non-indigenous or genetically modified species P4.3 – Removal of species, selective extraction of target/non-target species P4.4 – Disturbance, injury and death of species	Local Implementation of International and National Regulations for maritime activities: Update or develop local implementation plans for international and national regulations, adapting them to the specificities of the local coastal and marine areas, customising marine resource management measures, and defining specific sustainability thresholds for fishing and navigation activities. Develop local programmes to train and raise awareness among operators in the fishing, and navigation sectors to ensure compliance with environmental regulations and promote sustainable practices.	Number of local regulations implementing international and national regulations adopted: Measures the number of local regulations adapting national and international regulations to the specificities of the coastal and marine areas. Compliance Rate of Local Maritime Activities: Measures the percentage of local maritime operations that meet the updated international and national regulatory standards. Training Programme Participation Rate: Tracks the number of operators in the fishing and navigation sectors who have participated in training programmes focused on compliance and sustainable practices.	Yes	No	Management and Governance
			Development of Sustainable Management Strategies for Aquaculture and Fishing: Implement guidelines and policies for sustainable aquaculture management that prevent overfishing and the destruction of marine habitats while ensuring the conservation of fish resources and the protection of non-target species. Support the adoption of selective and responsible fishing methods, encouraging the use of equipment and techniques that reduce negative impacts on marine biodiversity.	Rate of Reduction of Incidents of Overfishing: Monitor changes in the rates of overfishing before and after the implementation of the new sustainable aquaculture guidelines. Adoption Rate of Sustainable Fishing Equipment and Techniques: Assesses the percentage of local fishing operations using equipment and techniques that minimise the negative impact on marine biodiversity.	Yes	No	Management and Governance

Status Component (EOs)	Priority Interaction		Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM		Nature of the Recommendation
	Economic Activity (ICZM elements)	Pressures (EOs)			Sustainable Development and Integrity of the Coastal Zone	Addressing Natural Hazards and Disasters	
			Development of Operational Tools and Local Governance for Integrated Coastal Zone Management (ICZM): Promote the development of local guidelines for Integrated Coastal Zone Management (ICZM) that integrate international and national directives with local needs and specificities. Implement local incentive and sanction systems to promote compliance with environmental regulations and encourage sustainable practices among local economic operators. Actively involve the local communities in the creation of management plans and in environmental monitoring, to ensure that policy decisions reflect local needs and priorities.	Number of Local ICZM Guidelines Developed: Counts the number of newly developed local ICZM guidelines reflecting the integration of broader directives with the local needs. Number of local Incentive and Sanction Systems implemented: Counts the number of local incentive and sanction systems promoting compliance with the environmental regulations. Number of initiatives (meetings, surveys, etc.) activated to involve local communities: Counts the number of initiatives involving local communities in the creation of management plans and in environmental monitoring.	Yes	Yes	Management and Governance
			Enhancement of Environmental Impact Monitoring and Assessment: Establish advanced monitoring systems to assess the impact of maritime transport, aquaculture, and fishing activities on marine biodiversity, with particular attention to the health of *Posidonia oceanica* meadows. Use the collected data to inform and update environmental management policies, ensuring effective conservation strategies for marine biodiversity.	Number of implemented Monitoring Systems: Measures the number of advanced monitoring systems established for assessing the impact on marine biodiversity. Health Status of *Posidonia Oceanica* Meadows: Monitors the health indicators of *Posidonia oceanica* meadows as a direct measure of the effectiveness of new environmental policies.	Yes	No	Assessment

Status Component (EOs)	Priority Interaction: Economic Activity (ICZM elements)	Priority Interaction: Pressures (EOs)	Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM: Sustainable Development and Integrity of the Coastal Zone	Objective of the CRF for ICZM: Addressing Natural Hazards and Disasters	Nature of the Recommendation
			Promotion of Integrated Sustainable Coastal Infrastructures: Develop and implement plans for coastal infrastructures that adhere to sustainability principles, reducing the impact on marine protected areas and promoting the conservation of marine species and coastal habitats.	Number of Coastal Infrastructure Projects Meeting Sustainability Criteria: Tracks the number of coastal infrastructure projects developed that adhere to the outlined sustainability principles.	Yes	Yes	Management
S3 (Seafloor and coastal integrity) – Interface	A6.2 – Transport – shipping A1.2 – Infrastructure related to coastal/watercourse morphology alteration	P5.3 – Input of litter P2.1 – Changes to hydrological conditions P4.2 – Introduction of microbial pathogens P4.3 – Removal of species, selective extraction of target/non-target species P4.4 – The disturbance, injury and death of species	Management and Control of the Impact of Port Activities: Review and strengthen policies and regulations related to the management of port activities to reduce the introduction of solid waste, including microplastics into the sea.	Number of regulations related to the management of port activities, in particular to the reduction in Solid Waste and Microplastics adopted: Counts the number of regulations related to the management of port activities and aimed at reducing the percentage of solid waste and microplastics entering the sea from port activities following policy revisions.	Yes	Yes	Management
			Improvement of Hydrological Conditions and Biodiversity Protection: Adopt coastal management strategies that preserve and/or restore the natural hydrological conditions and protect marine biodiversity from selective extraction and species destruction. Strengthening the application of conservation programmes – via the implementation of local measures – for threatened species and critical habitats, such as those supporting *Posidonia oceanica* meadows, which are key indicators of marine ecosystem health.	Number of coastal management initiatives implemented: Counts the number of coastal management initiatives that successfully preserve and/or restore natural hydrological conditions. Conservation Success Rate for Threatened Species: Evaluates the effectiveness of conservation programmes in improving the population status of threatened species and the health of critical habitats like *Posidonia oceanica* meadows.	Yes	Yes	Management and Governance

Status Component (EOs)	Priority Interaction: Economic Activity (ICZM elements)	Priority Interaction: Pressures (EOs)	Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM: Sustainable Development and Integrity of the Coastal Zone	Objective of the CRF for ICZM: Addressing Natural Hazards and Disasters	Nature of the Recommendation
			Development of Operational Tools for Marine Environmental Monitoring: Establish continuous monitoring systems to assess the impact of maritime activities on water quality and the integrity of the seafloor. Use the collected data to inform environmental management strategies and adjust operational practices in the maritime sector to reduce negative impacts.	**Number of Monitoring Systems established:** Counts the number of continuous monitoring systems established for maritime activities and their impact on water quality and seafloor integrity. **Amount of Environmental Data used:** Evaluates how often the collected environmental data is used to adjust and improve maritime operational practices.	Yes	No	Assessment
			Promotion of Sustainable Infrastructure: Ensure that all new constructions or significant modifications to coastal infrastructures undergo updated environmental impact assessments that reflect the latest scientific knowledge and international best practices. EIAs should include detailed analyses of impacts on the coastal morphology and watercourses and propose effective mitigation measures. Encourage the design and development of coastal infrastructures that respect the natural dynamics and ecological characteristics of coastal zones, adopting construction techniques that minimise the environmental impact and enhance ecosystem resilience.	**Number of updated EIA provisions:** Monitors the percentage of new or significantly modified coastal infrastructure projects that undergo environmental impact assessments incorporating the latest scientific knowledge and best practices. **Number of Initiatives/Regulations Promoting Sustainable Design Principles:** Tracks the number of initiatives encouraging coastal infrastructure projects designed and developed using techniques that minimise the environmental impact and are in alignment with the natural dynamics of coastal zones.	Yes	No	Management

Table 2. Identification of the operational recommendations for the project area within Albania

Priority Interaction					Objective of the CRF for ICZM		
Status Component (EOs)	Economic Activity (ICZM elements)	Pressures (EOs)	Operational Recommendations	Progress Indicators	Sustainable Development and Integrity of the Coastal Zone	Addressing Natural Hazards and Disasters	Nature of the Recommendation
S2 (Marine and coastal food webs and fish stocks) – Landward	A5.1 (Marine aquaculture) A6.1 (Transport infrastructure (including ports)	P4.1 – Transfer of native species and the introduction/diffusion of non-indigenous or genetically modified species P5.3 – Input of solid waste and microplastics	Control and Prevention of the Introduction of Invasive Species: Strengthen and implement new measures to prevent the introduction of non-indigenous species, which can be particularly harmful in terrestrial and coastal ecosystems. This can include monitoring and control at entry points such as ports and border areas (with particular reference to activities related to aquaculture and international trade), as well as awareness campaigns for local communities and stakeholders. The creation of environmental risk assessment protocols, traceability systems and the adoption of possible quarantine measures.	Number of Non-Native Species Identified and Controlled: Monitors the number of non-native species identified at checkpoints such as ports and border areas. A decrease in the number of these species could indicate the effectiveness of the implemented measures. Level of Compliance with the Environmental Risk Assessment Protocols: Assesses the percentage of operators in international trade and aquaculture adhering to new environmental risk assessment protocols and traceability systems.	Yes	No	Assessment and Management

Priority Interaction					Objective of the CRF for ICZM		
Status Component (EOs)	Economic Activity (ICZM elements)	Pressures (EOs)	Operational Recommendations	Progress Indicators	Sustainable Development and Integrity of the Coastal Zone	Addressing Natural Hazards and Disasters	Nature of the Recommendation
			Development of Environmental Management Plans for Transport Infrastructure: It is important that new terrestrial transport infrastructure, including ports, are designed and managed with a strong focus on environmental sustainability. This can include environmental impact assessments, the adoption of clean technologies, and urban planning that minimises the impact on the coastal zones and their ecosystems. Develop management plans that take into account the interaction between terrestrial and coastal ecosystems. The protection of interface areas between land and sea, such as wetlands and mangroves, which are crucial for the health of coastal and terrestrial ecosystems.	**Number of Infrastructure Projects with a Complete Environmental Impact Assessment:** Monitors the number of new transport infrastructure projects that include a complete environmental impact assessment. **Percentage of Expansion of Protected Terrestrial and Coastal Areas:** Measures the increase in protected areas, such as wetlands and mangroves, following the implementation of environmental management plans.	Yes	Yes	Management
			Integrated Management of Solid Waste and Microplastics: Promote policies and practices to enforce the management of solid waste and microplastics, particularly in urban and industrial areas near coastal zones. This can include the implementation of differentiated waste collection systems, the enhancement of recycling infrastructures, and the promotion of initiatives to reduce plastic use.	**Percentage Reduction of Solid Waste and Microplastics:** Monitors the percentage reduction of solid waste and microplastics in urban and industrial areas near coastal zones. **Waste Recycling and Recovery Rate:** Evaluates the increase in the waste recycling and recovery rate in the target areas.	Yes	No	Management and Governance

Priority Interaction					Objective of the CRF for ICZM		
Status Component (EOs)	Economic Activity (ICZM elements)	Pressures (EOs)	Operational Recommendations	Progress Indicators	Sustainable Development and Integrity of the Coastal Zone	Addressing Natural Hazards and Disasters	Nature of the Recommendation
			Promotion of Multi-Level Collaboration and Governance: Given the transboundary nature of many environmental issues, it is essential to promote collaboration between different levels of government and with international organisations. This can include sharing best practices, participating in international initiatives for the protection of the marine and coastal environment, and collaborating in the research and development of innovative solutions.	Number of Shared Initiatives or Collaboration Projects: Counts the number of shared initiatives or collaboration projects between different levels of government and with international organisations. Number of Innovative Solutions implemented: Monitors the number of innovative solutions developed and implemented through multi-level collaboration.	Yes	Yes	Governance
S3 (Seafloor and coastal integrity) – Landward	A7.1 (Urban uses) A5.3 (Agriculture) A7.2 (Industrial uses)	P4.5 – Cultivation and artificialisation of natural habitat P5.4 – Input of CO2 and greenhouse gases	Sustainable Urban Planning and Coastal Urbanisation Control: Implement sustainable urban planning that manages and balances expansion along the coastlines. This can include defining non-buildable zones, promoting urban green spaces, and conserving natural coastal areas. Develop guidelines and regulatory tools for the construction of second homes or tourist facilities, ensuring they meet the environmental standards and do not compromise the ecological integrity of coastal zones.	Percentage of preserved or restored coastal areas: Measures the effectiveness of conservation policies for coastal areas and non-buildable zones. Number of new constructions compliant with the environmental standards: Assesses the effectiveness of guidelines and regulatory tools for new constructions, including second homes and tourist facilities.	Yes	Yes	Management and Governance

Status Component (EOs)	Priority Interaction		Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM		Nature of the Recommendation
	Economic Activity (ICZM elements)	Pressures (EOs)			Sustainable Development and Integrity of the Coastal Zone	Addressing Natural Hazards and Disasters	
			Sustainable Agriculture Management and Reduction of Soil Artificialisation: Promote sustainable agricultural practices that reduce environmental impact, such as organic farming, crop rotation and efficient water resource use. Limit the conversion of natural habitats into agricultural or industrial lands through stricter regulations and incentives for the conservation of natural soils.	**Percentage of agricultural lands managed using sustainable practices:** Indicates the level of adoption of sustainable practices such as organic farming and crop rotation. **Rate of conversion of natural habitats into agricultural or industrial lands:** Monitors the effectiveness of regulations and incentives aimed at conserving natural soils.	Yes	No	Management
			Reduction of Greenhouse Gas Emissions and Improvement of Air Quality: Encourage the use of renewable energies and low-carbon technologies in urban, agricultural and industrial activities. Implement sustainable mobility policies in urban areas, such as enhancing public transportation, creating bike lanes, and establishing low-traffic zones.	**Percentage reduction in greenhouse gas emissions in key sectors (urban, agricultural, industrial):** Measures the impact of using renewable energies and low-carbon technologies. **Increase in the use of sustainable transportation in urban areas:** Evaluates the effectiveness of sustainable mobility policies, such as enhancing public transportation and creating bike lanes.	Yes	No	Management and Governance

Status Component (EOs)	Priority Interaction: Economic Activity (ICZM elements)	Priority Interaction: Pressures (EOs)	Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM: Sustainable Development and Integrity of the Coastal Zone	Objective of the CRF for ICZM: Addressing Natural Hazards and Disasters	Nature of the Recommendation
			The Integrated Planning, Monitoring and Management of Land: Develop integrated land planning and management models that consider a balance between urban and industrial development, agricultural activities, soil and coastal integrity conservation, and sustainable land use. An integrated approach is essential to mitigate the overall impacts of human activities on the environment and promote the responsible and sustainable use of local resources. Establish a continuous monitoring system to assess the impact of human activities on the integrity of the soil and coasts.	Number of development projects that integrate environmental sustainability criteria: Assesses the effectiveness of integrated land planning and management models. Frequency and quality of monitoring reports on the impact of human activities on the soil and coasts: Measures the effectiveness of the continuous monitoring system to assess the impact of human activities.	Yes	Yes	Assessment and Management
S2 (Marine and coastal food webs and fish stocks) – Interface	A4.1 (Fish and shellfish harvesting) A5.1 (Marine aquaculture)	P4.1 – Transfer of native species, introduction/diffusion of non-indigenous or genetically modified species P4.3 – Removal of species, selective extraction of target/non-target species	Regulation and Sustainable Management of Fishing and Aquaculture: Implement or enhance regulations related to fishing and aquaculture, with special attention to bottom trawling and intensive aquaculture practices. This may include the establishment of fishing quotas based on scientific assessments of fish stocks, which means setting limits on the amount and type of fish that can be caught, based on a scientific understanding of the population size, reproduction rates and sustainability of different fish species. Additionally, promote selective fishing techniques that reduce the impact on marine habitats and regulate the use of antibiotics and other pollutants in aquaculture. Encourage the use of native species in aquaculture and develop waste and chemical management systems to reduce genetic and environmental pollution.	Compliance Rate with Fishing Quotas: Measures the percentage of fishing activities adhering to the established quotas, reflecting adherence to sustainable fishing practices. Reduction in Non-Selective Fishing Practices: Tracks the decrease in practices like bottom trawling and the increase in selective fishing techniques, indicating a reduced impact on marine habitats.	Yes	No	Management and Governance

Status Component (EOs)	Priority Interaction: Economic Activity (ICZM elements)	Priority Interaction: Pressures (EOs)	Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM: Sustainable Development and Integrity of the Coastal Zone	Objective of the CRF for ICZM: Addressing Natural Hazards and Disasters	Nature of the Recommendation
			Monitoring and Conservation of Marine Biodiversity: Strengthen and integrate monitoring, including through a programme that allows continuous and extensive observations both at sensitive points and with mobile detection tools, to assess the status of fish populations and the health of marine ecosystems, with particular attention to invasive species and the conservation of important native species such as Posidonia oceanica. Enhance and implement management plans for the conservation of Posidonia meadows and other sensitive marine habitats, defining further actions to limit activities that could damage them, such as unregulated anchoring and destructive fishing.	Status of Key Marine Species Populations: Monitors changes in the populations of critical species, like Posidonia oceanica, as an indicator of ecosystem health. Number of Damaging Activities Reported/Prevented: Tracks incidents of harmful activities like unregulated anchoring or destructive fishing, indicating the effectiveness of the conservation efforts.	Yes	No	Assessment and Management
			Education and Involvement of Local Communities: Promote and initiate new education and awareness programmes for coastal communities and professionals in the fishing and aquaculture sector, focused on marine conservation and sustainable fishing practices. Plan actions and initiatives to promote the involvement of local communities in the management of marine resources through responsible fishing and sustainable tourism initiatives, also envisaging economic incentives for practices that support environmental conservation.	Level of Local Community Engagement: Assesses the participation rate in education programmes and sustainable fishing or tourism initiatives, indicating the success of community involvement strategies. Changes in Local Fishing Practices: Monitors shifts in the local fishing practices towards sustainability, reflecting the impact of educational and awareness programmes.	Yes	No	Management

Status Component (EOs)	Priority Interaction: Economic Activity (ICZM elements)	Priority Interaction: Pressures (EOs)	Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM: Sustainable Development and Integrity of the Coastal Zone	Objective of the CRF for ICZM: Addressing Natural Hazards and Disasters	Nature of the Recommendation
			Development of Local Governance Tools and International Collaboration: Strengthen the local governance tools for the effective management of marine resources, integrating national policies with the needs and capabilities of local communities. Enhance collaboration with international organisations and neighbouring countries for the transboundary management of marine resources and the fight against illegal, unreported and unregulated (IUU) fishing, developing new agreements, initiatives and governance instruments.	Number of Local Governance Initiatives Implemented: Tracks the implementation of new governance tools and policies at the local level, reflecting the effectiveness of management strategies. Extent of International Collaboration: Measures the level of engagement and the number of agreements with international bodies and neighbouring countries in managing marine resources and combating IUU fishing.	Yes	No	Management and Governance
S3 (Seafloor and coastal integrity) – Interface	A2.1 (Utilisation of natural resources: extraction/mining of sand, gravel, rocks and minerals) A5.1 (Marine aquaculture)	P4.2 – Introduction of microbial pathogens P4.3 – Removal of species, selective extraction of target/non-target species P1.2 – Extraction of marine and terrestrial bottoms (soil and subsoil)	Sustainable Management and Regulation of Aquaculture: Integrate existing regulations on marine aquaculture management, aiming to strengthen the prevention of the introduction of exotic or genetically modified species. This may include creating guidelines for the selection of species to be farmed, favouring native species and establishing more rigorous controls on water quality and farming practices. Develop monitoring programmes to assess the impact of aquaculture on local marine communities and biodiversity, in order to quickly identify and mitigate any negative effects.	Number of Incidents with Non-Native or Genetically Modified Species: Tracks incidents involving the introduction of non-native or genetically modified species in aquaculture, aiming for a reduction over time. Aquaculture Impact Assessment Reports: Number of periodic reports assessing the impact of aquaculture practices on local marine biodiversity and water quality, indicating adherence to sustainable practices.	Yes	No	Management

Status Component (EOs)	Priority Interaction: Economic Activity (ICZM elements)	Priority Interaction: Pressures (EOs)	Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM: Sustainable Development and Integrity of the Coastal Zone	Objective of the CRF for ICZM: Addressing Natural Hazards and Disasters	Nature of the Recommendation
			Control and Limitation of Natural Resource Extraction: Update and refine stricter regulations for the extraction of sand, gravel, rocks and minerals, both in marine and terrestrial environments. This may involve functional analyses leading to the subsequent definition of quantitative limits on extraction and the designation of additional areas where extraction is prohibited. Promote and apply sustainable extraction techniques that minimise the environmental impact, such as the use of less invasive methods and the rehabilitation of extracted areas to restore natural habitats.	**Compliance Rate with Extraction Regulations:** Measures the percentage of extraction activities adhering to the new, stricter regulations, including respecting prohibited extraction zones. **Environmental Impact Assessments of Extraction Sites:** Frequency of assessments aimed at verifying the reduction of negative environmental impacts due to extraction activities.	Yes	Yes	Management and Governance
			Environmental Education and Awareness Programmes: Initiate education and awareness campaigns targeted at local communities, aquaculture operators, and those involved in the extraction of natural resources. The goal is to increase awareness of the importance of conserving marine and coastal ecosystems and sustainable practices. Actively involve local communities in the management and monitoring of coastal ecosystems, promoting civic participation and environmental stewardship.	**Community Engagement Levels:** Evaluates the participation rates in educational and awareness programmes, aiming for increased community involvement over time. **Changes in Local Practices:** Monitors the shifts in local practices towards sustainability, as a result of the education and awareness campaigns.	Yes	No	Management

Status Component (EOs)	Priority Interaction: Economic Activity (ICZM elements)	Priority Interaction: Pressures (EOs)	Operational Recommendations	Progress Indicators	Objective of the CRF for ICZM: Sustainable Development and Integrity of the Coastal Zone	Objective of the CRF for ICZM: Addressing Natural Hazards and Disasters	Nature of the Recommendation
			Development of Integrated and Multi-Level Governance Tools: Strengthen environmental governance at the local, national and international levels, integrating environmental policies with a multi-level approach. This may include collaboration between governmental agencies, non-governmental organisations and private sectors for the shared management of natural resources. Promote international agreements and cross-border collaborations for the management of marine and coastal resources, in order to effectively address environmental challenges that transcend national boundaries.	Number of Implemented Multi-Level Governance Initiatives: Tracks the implementation of new governance tools and policies at various levels, reflecting the effectiveness of integrated environmental management. Extent of International Collaboration: Measures the level of engagement and number of agreements with international organisations and neighbouring countries in managing marine and coastal resources.	Yes	Yes	Governance

Strategical Recommendations

In addition to the specific recommendations for the priority interactions, the analysis of the conclusions and gaps identified in Tasks 1 and 2 has made it possible to proceed with the development of **strategic recommendations** that are valid for addressing cross-cutting aspects identified from the perspective of improving the governance and management system.

Identified Cross-Cutting Aspects	Strategical Recommendation
Deficiency in terms of specific prescriptions and focus of the regulatory provisions on the selected interactions: from the analysis of the regulatory provisions of the UNEP/MAP system documents, despite the numerous objectives, measures and recommendations relevant to the selected interactions, to the status component, or to the economic activity considered from the perspective of the interaction, it would seem that there are no corresponding prescriptions inviting and thus, where agreed, obliging Contracting Parties to implement policies aimed at reducing the impacts caused by the economic activities in question. Moreover, most provisions do not contain specific technical elements related to the selected interactions but have a general cross-cutting profile and can be applicable to different contexts.	The analysis of governance instruments, carried out in Task 2, highlighted the need to strengthen multi-level governance. The regulatory provisions identified in the UNEP/MAP and EU system documents outline numerous objectives, measures and recommendations that are relevant when addressing status components and economic activities but without prescribing a policy framework aimed at mitigating environmental impacts. In this regard, a strategic recommendation would be the development of a dedicated interoperable platform that is capable of collecting the UNEP/MAP-related provisions and linking them to existing local and territorial operational and implementation instruments. Such a platform would enable the identification of territorial gaps and inconsistencies in relation to the strategic provisions identified, providing a political and strategic framework for actions to strengthen multi-level governance and to develop or enhance and standardise local and territorial operational and implementation tools. This approach could add significant value, as it has the potential to tap into EU funding assets for multi-level governance and for strengthening processes, institutional dialogue and the synergy of administrative action, developing harmonised approaches. Such systems could be implemented and supported along with a reward and incentive system and progress tracking in the application of measures and analysis of their effectiveness. These specific aspects could also be operationally promoted through the implementation of tools and methods such as the Management System and Audit Scheme (ICZM SAS) developed in the CAMP Otranto Project

Identified Cross-Cutting Aspects	Strategical Recommendation
Data gaps and poor uniformity in data processing and analysis	To enhance and strengthen the phases of environmental assessment and analysis, as well as the subsequent decision-making process, it is recommended to implement specific guidelines for environmental monitoring and management. This aims to optimise and standardise the processes of data collection, management, aggregation and presentation. The adoption of such a process would require the following actions related to data management: Collection and organisation of data (georeferenced or otherwise) and their categorisation according to specific classifications/layers that fall under uniform and predefined DPSIR categorisations (see, for example, the approach proposed in Task 0). Translation of the collected data into specific environmental indicators (related to environmental pressures, economic activities and environmental status). Use of pre-established models for data aggregation and presentation. The implementation of the above processes offers the following operational advantages: ▪ Use of a standardised environmental analysis model, which streamlines the assessment phases and frames them into predetermined outputs (see the EIAT related to Task 0). ▪ Simplification and enhancement of the use of indicators, scores and reference thresholds to classify the environmental status and current quality of the governance strategies used, enabling a more direct application of environmental data to the drafting of operational recommendations and governance. ▪ Increased accuracy in the processes of interrelation, comparison and study of environmental dynamics in different geographical areas and/or with different management systems, to improve the drafting of global policies. ▪ Strengthening the identification of transboundary dynamics related to the generation and transport of environmental pressures. ▪ The use of joint strategies and policies in outlining operational reference frameworks. ▪ Enhancement of monitoring infrastructures, data collection and environmental management, with the quicker identification of gaps related to all the processes involved (analysis, assessment and governance).

FOSTERING PARTNERSHIPS ACROSS THE ADRIATIC SEA

For coastal sustainability in Albania and Italy

CAMP Otranto is the first transboundary project since the launch of the Coastal Areas Management Programme (CAMP) in 1989. The project's main objective is to test the CAMP methodology at a transboundary scale in the Otranto Strait, including marine areas within and beyond national jurisdiction which affect both Albania and Italy regardless of different natural, juridical and socio-economic conditions. By tackling coastal and marine environmental challenges in this very sensitive part of the Mediterranean basin, the project contributesto the development of sustainable coastal management and sharing know-how and modelling best practice

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