

for the Black Sea – Romania, Bulgaria - MARSPLAN – BS -





Progress registered in Maritime Spatial Planning research in the Black Sea Region

The Maritime Spatial Planning (MSP) is considered a public process related to spatial and temporal distribution of human activities in marine areas. In the last ten years, Romania developed research projects and pilot plans in the field of Maritime Spatial Planning, coordinated by National Institute for Marine Research and Development “G.Antipa”, Constanta (NIMRD).



Maritime Spatial Planning

On 23 July 2014, the Directive 2014/89/EU, setting-up the framework for Maritime Spatial Planning, was elaborated.

This document pointed-out important targets and stages for maritime spatial plans applicable in all European seas and states, Romania included.

Black Sea basin specificities

- Crossroad of different cultures, a political, social and economic fragmentation
- The largest semi-enclosed anoxic basin in the world
- The most endangered sea in Europe
- Different and divergent geopolitical and strategic interest



Black Sea Region Marine corridor

5.2.1.2. Transportation of oil and gas

The Romanian national system of oil transportation comprises a terminal owned by the state (Oil Terminal SA Constanța) and one run by KMG International (Midia Marine Terminal in Năvodari), main pipelines and local pipelines which are transporting crude oil from perimeters operating in the country and crude oil imported and delivered to refineries (Fig. 5.2.1-3a).

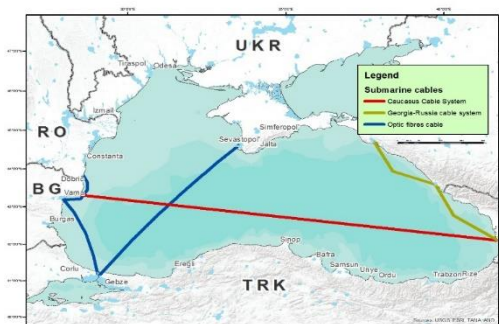
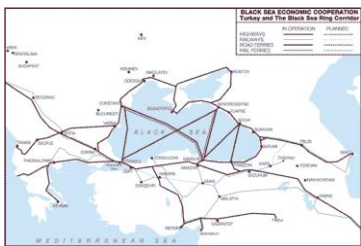
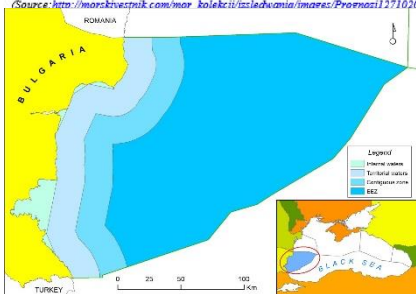
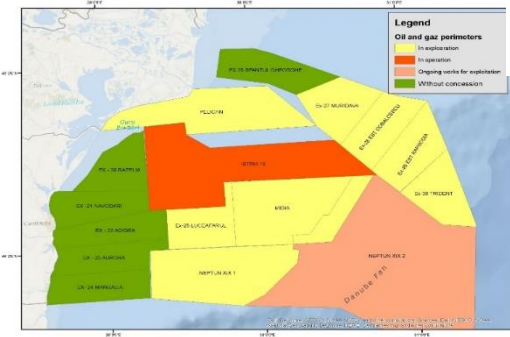
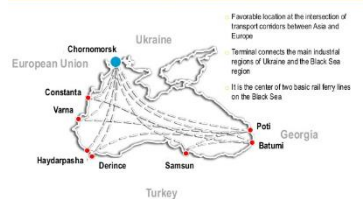


Figure 5.2.1-3 Offshore blocks for exploration and extraction of oil and gas

(Source: http://morskivestnik.com/mor_kolektiv/issledovanie/marac/Prognos127102013.pdf)



TERMINAL IS LOCATED ON THE INTERSECTION OF INTERNATIONAL TRANSPORT CORRIDORS



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SAVE THE DATE - 1st Workshop of the International Forum for MSP

The Directorate General for Maritime Affairs and Fisheries, jointly with IOC-UNESCO, are organising the 1st workshop in Brussels,...

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The European Maritime Spatial Planning Platform provides a single interface to draw together experience and expertise from across Europe and make it available in a readily accessible, implementation-oriented format. It serves as the gateway and exchange forum for all involved in MSP throughout Europe.

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or
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Future Conference: Wind & Maritime 2018
The 7th Future Conference: Wind & Maritime – the conference in the Northeast that c...

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Interreg North West Europe Call on Renewable Energy. Deadline: 31 July [More information..](#)

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Black Sea Profiles



European
MSP Platform



MSP in Practice: searchable databases

- MSP Practice descriptions: 388
 - **Black Sea: 20**
- MSP Project descriptions: 137
 - **Black Sea: 17**



CONTACT THE SEA BASIN HELPDESK

blacksea@msp-platform.eu

Black Sea

General Introduction to the Black Sea

The Black Sea is strategically located in Southeastern Europe on the borders of Europe, Central Asia and the Middle East. It occupies an area of 436,400 km², excluding the Sea of Azov. There are 6 littoral states, including 2 EU member states: Bulgaria and Romania, and 4 non-member states: Georgia, the Russian Federation, Turkey and Ukraine. The Black Sea is connected to the Mediterranean Sea and the Atlantic Ocean via the Aegean Sea and the Sea of Marmara. The Sea of Azov drains into the Black Sea through the Kerch Strait.

Two of the largest rivers in Europe in terms of discharge – the Danube and Dnieper – flow into the Black Sea, which, together with the fact that the Black Sea is connected to the World Ocean only through the narrow Bosphorus Strait, accounts for the low levels of salinity of the sea water. In addition, the deeper layers of water in the Black Sea do not mix with the upper layers, which receive oxygen from the atmosphere, and, as a result, the deeper layers of water are for the most part anoxic.

CROSS-BORDER BLACK SEA PRACTICES (SELECTION)

MSP Methodology for Black Sea

Preparation of Sea-Use Plans for the 12 km zone in Varna and Constanta

Maritime spatial plan for the cross-border area (Mangalia-Shabla)

Conservation and protection of the Black Sea through establishment of new Marine Protected Areas (MPAs)

MISIS Black Sea Marine Atlas

Tool for the identification and assessment of Environmental Aspects in Ports (TEAP)

Adaptive Marine Policy (AMP) Toolbox

Sea basin descriptions

- MSP Institutions & structures
- Sea-basin cooperation on MSP
- Geography, ecosystems & uses
- Relevant sectoral & non-sectoral organizations
- Sea basin MSP projects
- Selected cross-border MSP practices

Black Sea cooperation on MSP

In 2013, the first inventory of Black Sea MSP was started by the ICZM Project "Black Sea CBC - Joint Operational Program" regarding national policies for marine space, data collection and information exchange, cooperation with Member States, and cooperation with third countries.

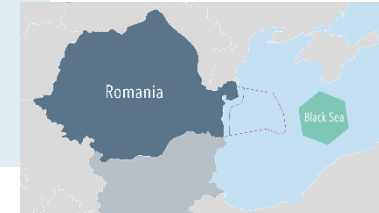
Some international projects included, partially or integrally, MSP based on the MSP Directive elaborated in 2014. These permitted the development of collaborations between Black Sea countries in different consortiums.

The project **MARSPLAN** is important in this respect, as it includes the development of a full-fledged, formal maritime spatial plan for the cross-border area of Mangalia-Shabla (Romania and Bulgaria). This is a pilot project, which will provide impetus to the Black Sea cooperation on MSP. It includes for the first time the elaboration of MSP Methodology, legislation, rules, indicators, strategy, integrated maps and National Plans for Bulgaria and Romania as Member States. Their experience can be enlarged and spread around the whole Black Sea, to the other neighbouring countries.



Country Information Profiles

- Basic facts on marine waters
- Overview of maritime uses
- MSP authorities & contacts
- MSP legislation
- MSP plans & considered sectors
- Links to relevant practices & plans



■ MSP legislation ■ National MSP authorities and Contacts

OVERVIEW OF MSP RELATED MARITIME USES

- Current main uses:



Tourism



Mineral extraction



Ports



Shipping



Military

- Other activities: agriculture and food products industry, port and underwater construction, shipbuilding, manufacturing industry, petrochemical industry, refineries, oil plants activities, nuclear energy industry, windmills power plants installed only on the coast, airport and air transport functioning and improving, steel processing industry
- Future uses: increasing interest as energy hub
- Concerns: nature protection and recreation under the Habitats Directive

WHICH MARITIME SPATIAL PLANS EXIST?

One regional and four local MSPs finalised till 2014 under ICZM principle (national law), no legislation in place.

1 regional plan (12-nm zone)

- Realized in the frame of the project PlanCoast, study case 12 NM, and annually improved by NIMRD (www.rmri.ro)

OVERVIEW OF MSP RELATED MARITIME USES

- The Black Sea is a key EU Eastern gate, a junction between Europe, Central Asia and the Middle East, important transport and energy hub, a crossroad of different cultures, a region with political, social and economic fragmentation. Bulgaria and Romania provide the EU access to the Black Sea and are therefore the main drivers of the initiatives related to MSP in the Black Sea region.
- The Black Sea Basin Directorate Management Plan for the period 2016-2021 specifies integrated measures aimed at protection against pollution, protection of specially designated areas, protection of coastal marine areas, water efficiency, adaptation to climate change, and others. The Marine Strategy of the Republic of Bulgaria (2016) assesses the current status of the marine waters (in compliance with Article 8 of the Marine Strategy Framework Directive), determines the good environmental status, and establishes environmental targets (in compliance with Articles 9 and 10 of the MSFD) in accordance with 11 descriptors.
- Current uses: increasing interest as an energy hub
- Issues: nature protection, economic development, transboundary cooperation
- Future uses:



Shipping



Tourism



Fisheries



Offshore renewable energy production



Aquaculture

*Ministry of Regional Development and Public Works,

- Maria Georgieva
- *Ministry of Transport, Information Technology and Communications – Executive Agency “Maritime Administration”
- *Ministry of Environment and Water – Black Sea Basin Directorate - Varna
- *Ministry of Agriculture, Food and Forestry – Executive Agency “Fisheries and Aquaculture”
- *Ministry of Energy

Contact: Institute of Oceanology at the Bulgarian Academy of Sciences (IO-BAS)

- Prof. Dr. Snejanka Moncheva: Director

Executive Agency “Maritime Administration” (EAMA)

- Peter Kirov, Chief Secretary

Center for Coastal and Marine Studies

- Dr. Margarita Stancheva: Director

Minister of Regional Development and Public Administration

General Department for Regional Development and Infrastructure,
• Bogdan Ghinea

Contact:

Ministry of Environment, Waters and Forests with National Committee of Coastal Zone
Department for Water, Forests and Fisheries (DWFF)
• Gheorghe Constantin
Ministry of Transport with the Commission of Integrated Maritime Policy

Inter-ministerial committee for coordination of EU's Integrated Maritime Policy Secretariat - DGSMAR and DN (Memorandum nr.20/9709/2009),
• Violanda Alayan

National Institute for Marine Research and Development
“Grigore Antipa” Constanta,
Romania, Laura Alexandrov



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Cross-Border MARitime Spatial PLANning in the Black Sea

PROJECT IMPLEMENTATION PERIOD:

January 2015 - December 2017

SPECIFIC FUNDING PROGRAMME:

EU DG MARE Calls for proposals

BUDGET:

2.050.000€

ABOUT THE PROJECT:

The MARSPLAN BS Project main objectives are:

- To support the implementation of the EU Directive for Maritime Spatial Planning in the Black Sea Basin, starting with its Member States, Romania and Bulgaria
- To create an MSP institutional framework for Romania-Bulgaria cross-border
- To develop the cooperation with all Black Sea countries in the field of MSP
- To consolidate the cross-border cooperation and the information exchange between Romania and Bulgaria
- To set out the vision and strategic goals for Black Sea area on MSP, taking into account the land-sea interaction

FUNDING PROGRAMME:

European Commission

SEA BASIN(S):



Black Sea

COUNTRIES:

Bulgaria

Romania

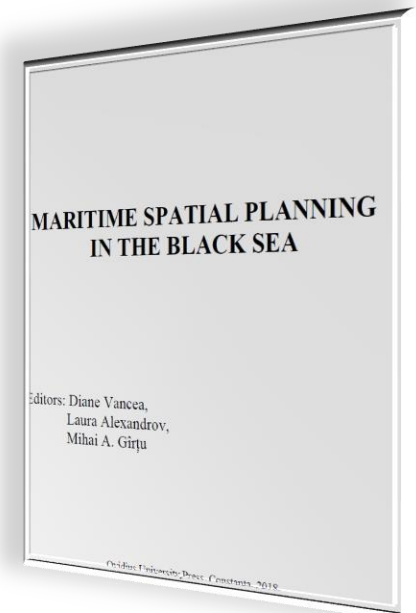
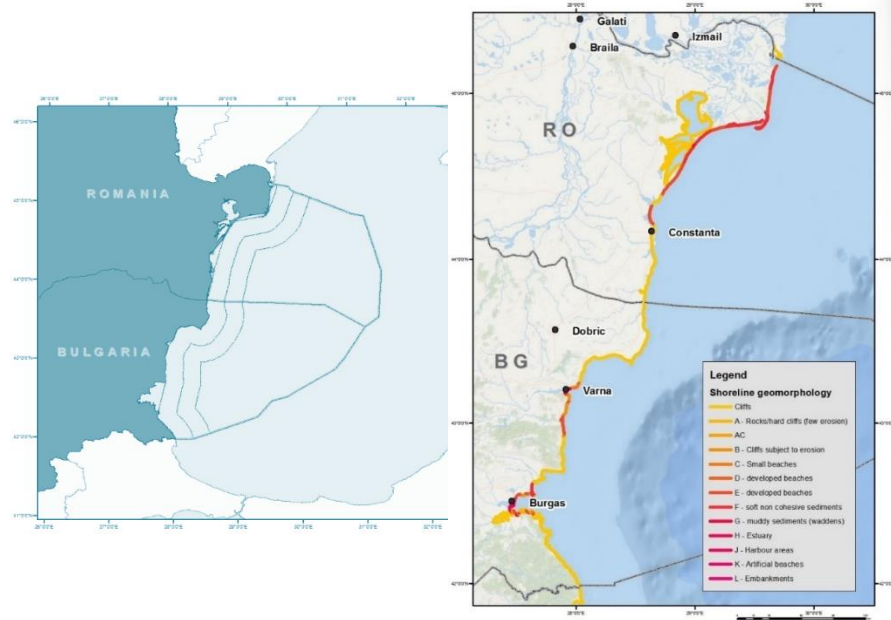
STATUS:

Ongoing

COMPLETION YEAR:



Results concerning data inventory



Elaboration of detailed studies for a complete analysis of the Romanian and Bulgarian maritime areas



Marine Space Monitoring



WP1, Activity 1.1, Component 1.1.1. Elaboration of detailed studies for a complete analysis of the Romanian and Bulgarian maritime areas



Fig. 7.1-1. NIMRD National Marine Monitoring Network- original NIMRD G4

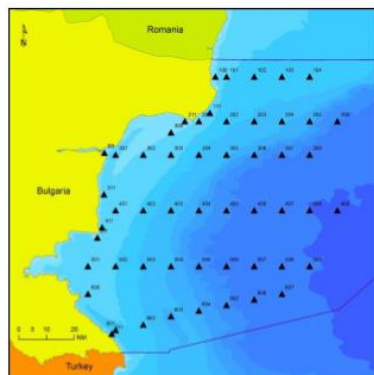


Figure. 7.2-1. Monitoring scheme (after Palazov et al., 2015)

The programme has been optimised several times to meet the challenges of changing oceans and climate as well as the needs of management activities of living and non-living marine resources and forecasting purposes. As a permanent system for observations, modelling and analysis the Bulgarian Black Sea Monitoring Programme is an important component of Global Ocean Observing System (GOOS) supporting operational ocean services and contributing to many scientific and technical studies, especially for analysing the changes of sea parameters.



Fig. 7.1-1. NIMRD National Marine Monitoring Network- original NIMRD G4



Fig. 7.1-1. NIMRD National Marine Monitoring Network- original NIMRD G4



Fig. 7.1-1. NIMRD National Marine Monitoring Network- original NIMRD G4

Lessons Learnt:

- Lack of information
- Too many information or approaches

Research

- Monitoring Networks

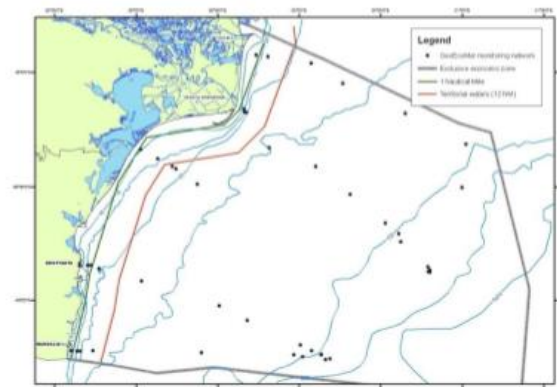
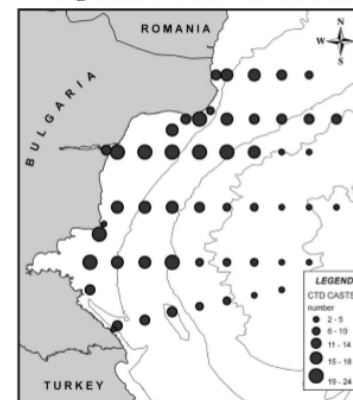


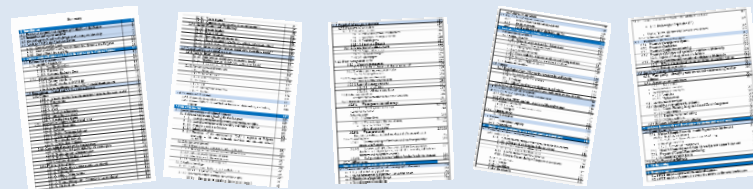
Fig.7.1-3. GEOECOMAR Marine Monitoring Network



A total of 2464 stations with CTD casts were carried out during the observation period. The distribution of CTD cast by stations is shown on Figure 7.2-2. It is obvious that the largest amount of casts are gathered on stations from the regular monitoring net, as the maximum number of CTD casts for one station is 24. The stations sampled during some national and international programs are with single measurement. Those cases which are outside monitoring scheme are not shown on Figure 7.2-2

Fig. 7.2-2. CTD casts per stations (after Palazov et al., 2015)

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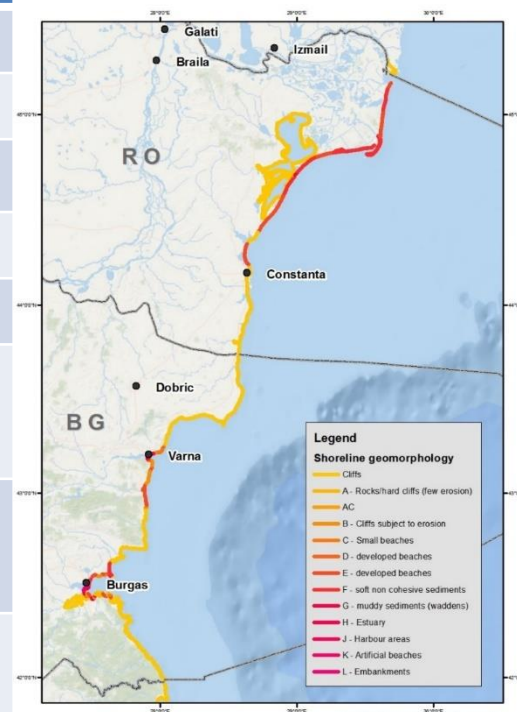


Elaboration of detailed studies for a complete analysis of the Romanian and Bulgarian maritime areas



Data collection/inventory (for analysis, mapping and study cases)

	TOPIC	DESCRIPTION	DATA SOURCE	DATA TYPE
GEOGRAPHICAL BOUNDARIES	1.Maritime space	Base line, territorial sea and EEZ.		Shape/Studies/ Reports
	2.Coastal zone/ development plans	Coastal zone management plans.		Shape, Studies, Evaluation Reports
	3.Boundaries related to EU Directives			
	Marine Strategy Framework Directive	Marine Strategy Framework Directive.		Shape/Study/Report
	Bathing Water Directive	Bathing waters designated under Directive 2006/7		Shape/Map/Study/ Report
	Urban Wastewater Directive	Sensitive areas (eutrophic/potentially eutrophic) designated under Directive 2006/113 .		Shape/Map/Study/ Report
	Water Framework Directive	River basin districts and coastal and transnational water bodies designated under River Basin Plans		Shape/Map/Reports
	Fisheries Policies and national provision	Boundaries established in the management measures concerning fisheries should be considered.		Shape/Map/Reports

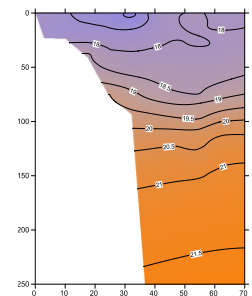
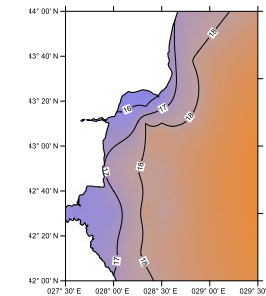
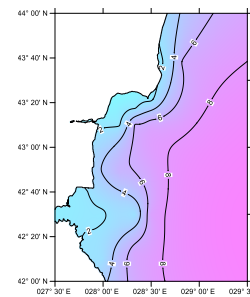
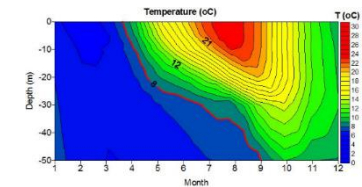
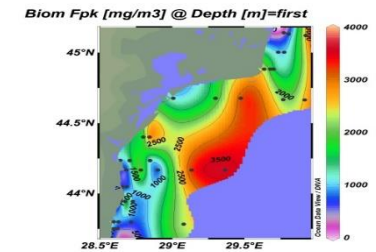
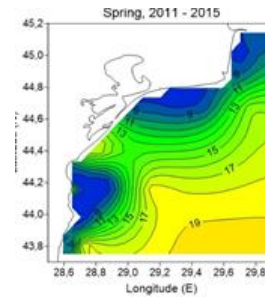




Data collection/inventory (for analysis, mapping and study cases)

DC

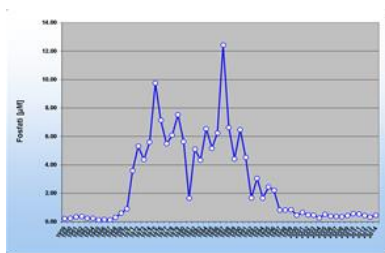
II MARITIME SPACE	PHYSICO-CHEMICAL CHARACTERISTICS	1.Meteorology	All the relevant networks, stations and forecasting models should be identified
		Weather station	Weather stations information should be collected including location, measured variables and statistic values.
		Wind	Statistics for available locations.
		Rainfall	Statistics for available locations.
		Atmospheric pressure	Statistics for available locations.
		Bathymetry	Bathymetric data and derivate data (slope, aspect, etc.) from the cross-border area from different database sources.
		2. Geology	Information from the geological context
		Geomorphology/ Add: coastal erosion	Geomorphological types: undulations, channels, mounds, depressions, crests, scarps, outcrops.
		Seabed Characterization	Sedimentological and geochemical features: grain size, geochemical data, sediment samples and scores, geohabitats.



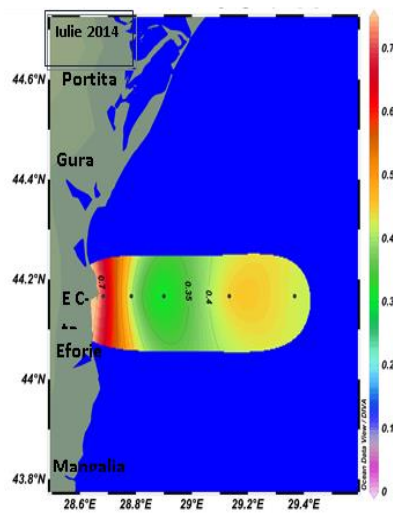


Data collection/inventory (for analysis, mapping and study cases)

II MARITIME SPACE	BIOLOGICAL CHARACTERISTICS	TOPIC
		5.Contaminants
		Input
		State
		Zones

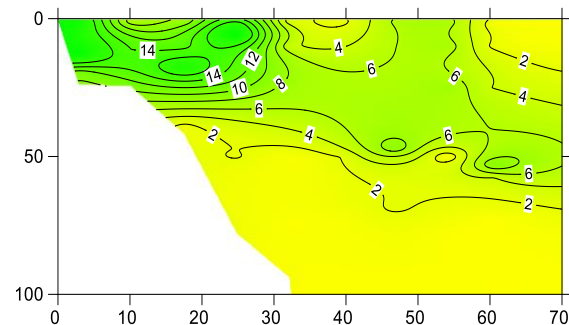
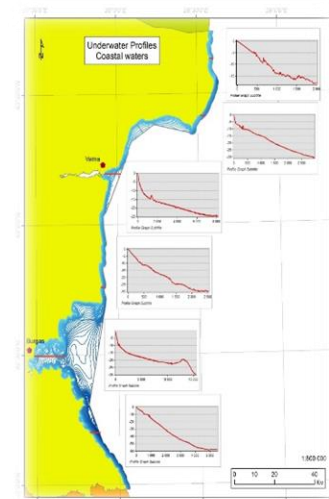
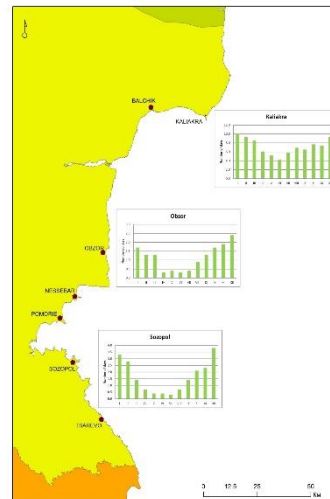


Nutrients



Chlorophyll a

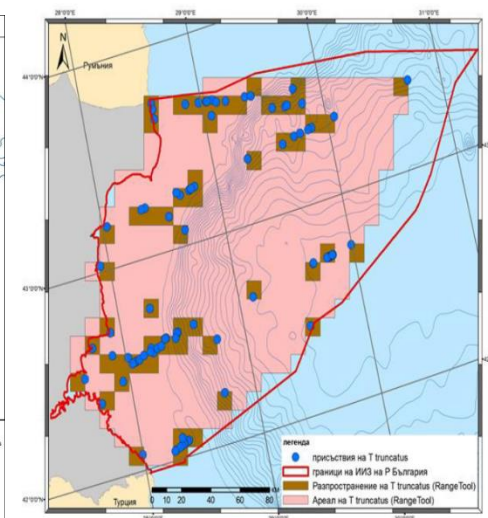
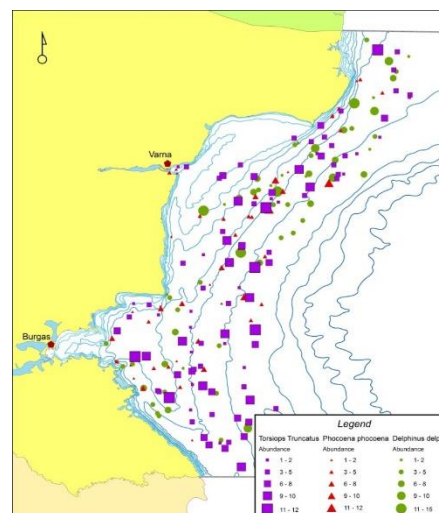
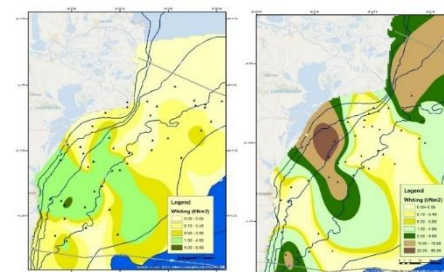
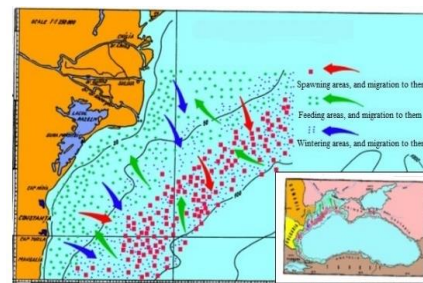
Eutrophication indicators





Data collection/inventory (for analysis, mapping and study cases)

II MARITIME SPACE	BIOLOGICAL CHARACTERISTICS	6.Natural Resources/ Species
		Fish
		Shellfish
		Algae and marine plants
		Marine mammals
		Birds
		Invasive species
		Spawning ground and nursery





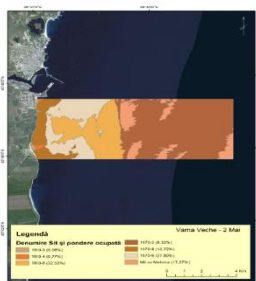
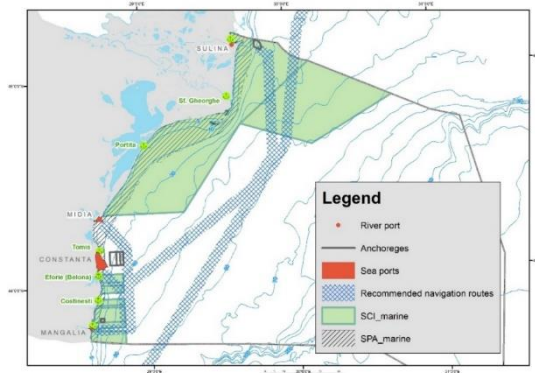
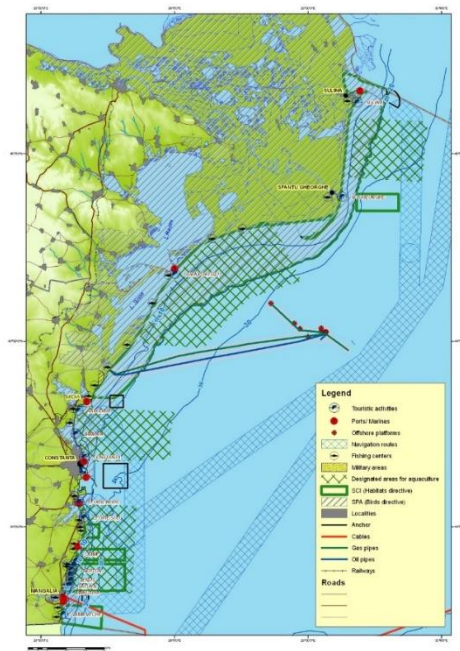
Data collection/inventory (for analysis, mapping and study cases)



II MARITIME SPACE	BIOLOGICAL CHARACTERISTICS	7.Habitats
		Benthonic habitats
		Pelagic habitats

II MARITIME SPACE	UNDERWATER ARCHAEOLOGY	Shipwreck inventory
		Underwater archaeological sites

IV INFRASTRUCTURES	Artificial reefs (if any)
	Platforms
	Cables and pipelines
	Others: Tourism ,





Data collection/inventory (for analysis, mapping and study cases)



III COASTAL ZONE	Coastal geomorphology/ coastal erosion
	Coastal development/ Population
IV INFRASTRUCTURES	Ports
	Coastal defence



Fig. 3.5. c and d - Landslides under the promenade alley/sidewalk Eforie South

Coastal Erosion Solution for consolidation or rehabilitation





Coastal Erosion

Solution for consolidation or rehabilitation



6.1.1.1.2. Actual trends of shoreline evolution

On short term, natural factors that influence coastal dynamics include 2 main categories: meteorological (wind by sand dissipation from emersion beach and wave and marine currents forming, temporally sea level increases) and hydrological (waves and currents –the main factors for shore dynamics, the oscillations of sea level).

Musura sector

After the extension of protection dykes from Sulina channel, sedimentation processes intensified mainly because sedimentary transport on Chilia arm was blocked. The present tendency is closing the bay and in the future to transform into a lagoon separated by the sea with a sand spit. Important sedimentation processes are highlighted in Musura bay. The maximum width of sedimentary deposits between 1975 and 2006 was ~ 30 m, this being the most active area. The appearance of the island in from of Musura bay involves problems regarding border with Ukraine, which was until now on Musura arm. The border should be redefined according with actual geomorphological changes. GPS shoreline measurements in this sector showed the elongation to south (2007-2009 ~ 2 km) and translation to west (20-25 m/year) of the island, specific for Danube Delta sand spits (Fig. 6.1.1-2a, b).



Fig. 6.1.1-2a, b. Accretion area of Musura bay (summer 2009 and 2010)

Sulina – Sf Gheorghe sector

This sector is the most affected by erosion, with the higher rate of shoreline retreat ~ 25 m/year. I between 1975 and 1995, marine shore near Rosu lake suffered a relative low erosion, in the nex

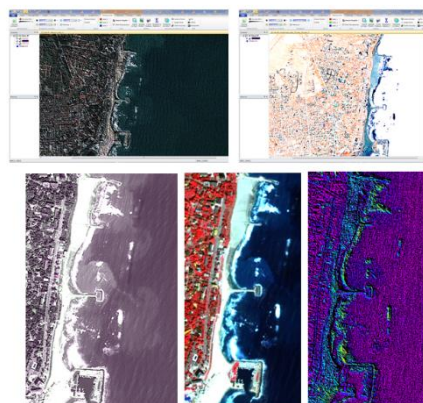


Fig. 1 The coastal protection works extensions at Eforie Nord
(beach extension in construction phase through sand nourishment - September 2015)

Lessons Learnt:

- More coastal maps than marine
- ICZM versus MSP
- Pressures evaluation
- Land-Sea interaction
- Own measurement

Hydrotechnical works



Fig. 3.2.6-4. Mamaia Suds sand nourishment



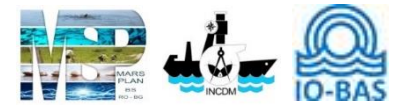
Fig. 3.2.6-5. Constanta Center and South sand nourishment



Fig 3.2.6-6. Eforie North sand nourishment



Data collection/inventory (for analysis, mapping and study cases)



Industry

Analysis of the current socio-demographic processes

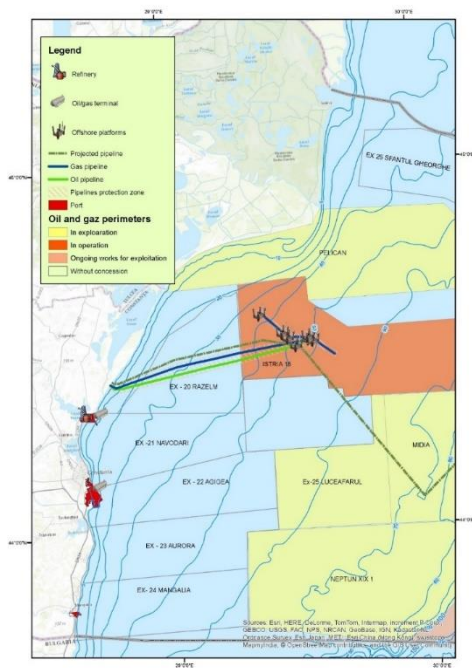
- Exploitation of non-living marine resources

- Oil and gas industry
- Refinery

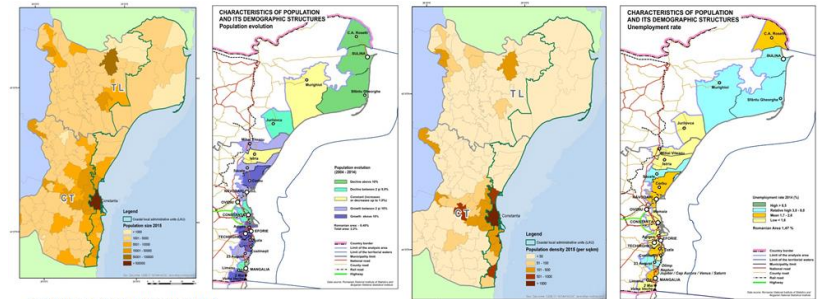
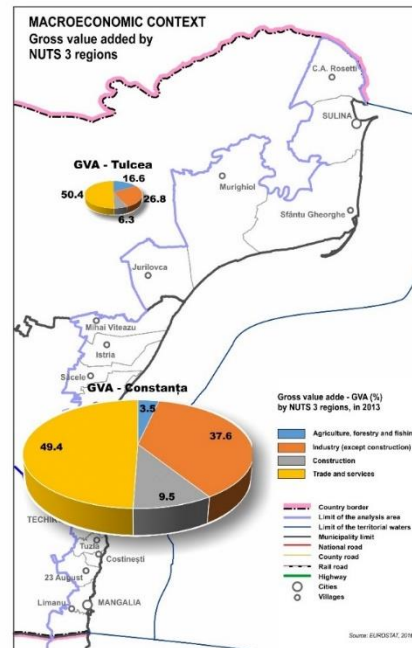
Characteristics of the population and its demographic structures

Population size (total population 2011, 2015, demographic evolution 2004-2014) Population density

The structures of human resources



IV
a)



Density of population in 2014
Source: Romanian NSI, Bulgarian NSI

	Population (no.)	Surface (Km ²)	Density (inh./km ²)
Total area	1210806	9302.5	130.2
Bulgarian Area	729044	5737.0	127.1
Romanian Area	481762	3565.5	135.1

Lessons Learnt:

- Too many chapters
- Lack of experience

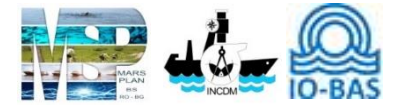
- Lack of knowledge
- Sharing responsibility

- differences between approach



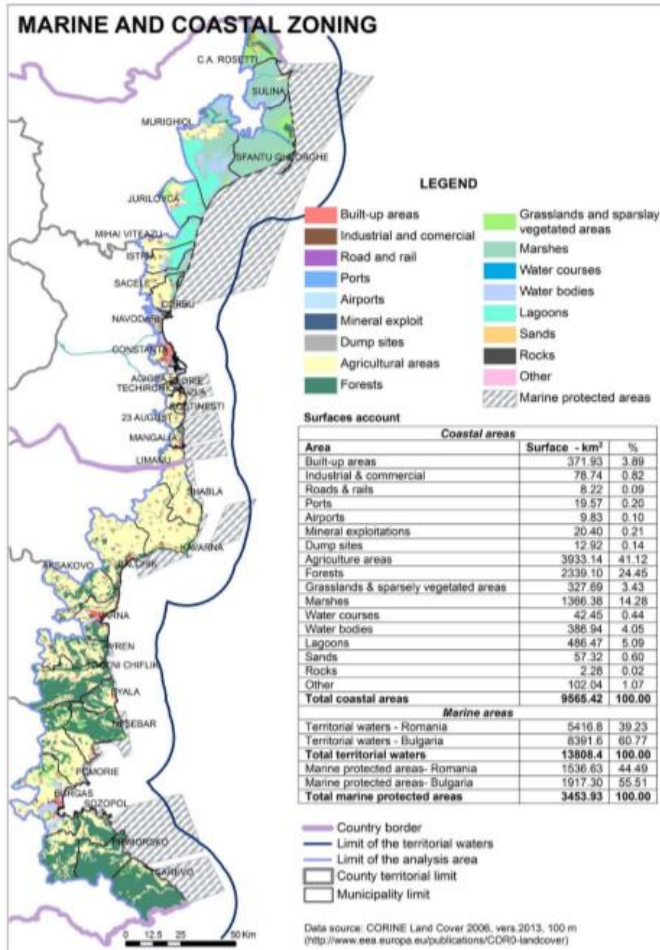


Data collection/inventory (for analysis, mapping and study cases)



Romania-Bulgaria: sea-coast

WP1, Activity 1.1, Component 1.1.1. Elaboration of detailed studies for a complete analysis of the Romanian and Bulgarian maritime area



(MARSPLAN-BS) Interim Activity Report No.3, Study 1.1.1. Version: Final

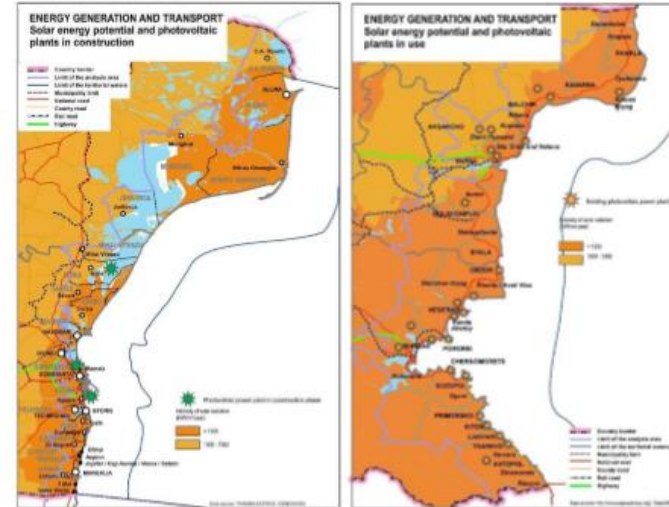
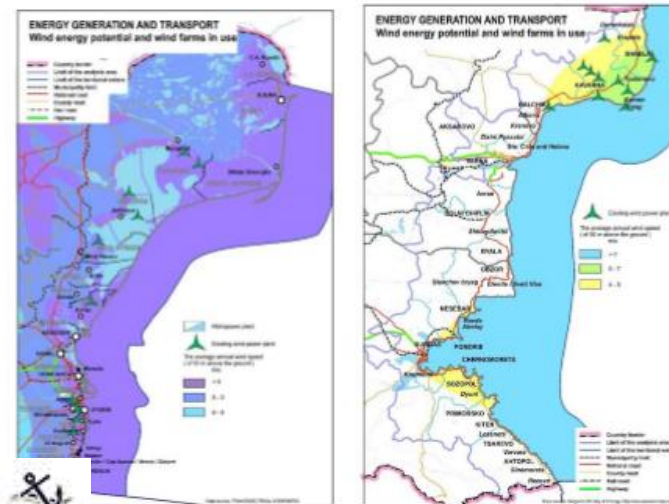


Fig. 3.2.3-1. Solar energy: a) Romania b) Bulgaria (original maps, URBAN INCERC)



2. Wind energy: a) Romania b) Bulgaria (original maps, URBAN INCERC)





Data collection/inventory (for analysis, mapping and study cases) Romania-Bulgaria: sea-coast mapping

Lessons Learnt:

- More coastal maps than marine
- ICZM versus MSP
- Pressures evaluation
- Land-Sea interaction

3.2.4. Telecommunications (NIMRD, URBAN INCERC)

The coastal zone of Romania and Bulgaria is characterized by the existence of a well-developed telecommunications network, with links between the two countries both on shore and offshore. On the coastal area, the existing optical fiber lines belong to Romanian telecommunications service provider, TELEKOM and to Global Communication Net (GCN), Bulgarian supplier of similar services.

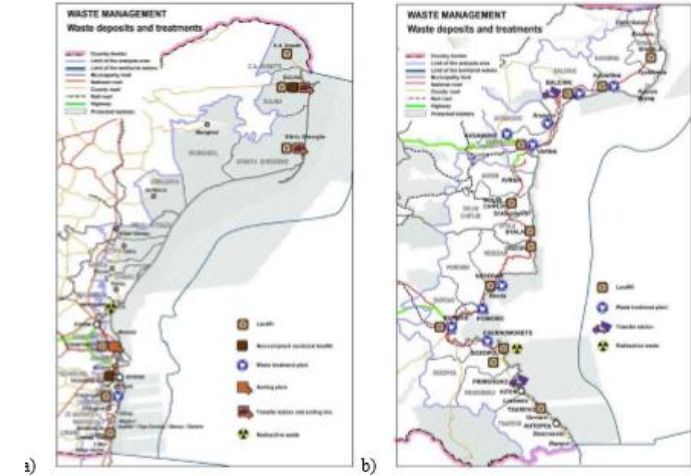
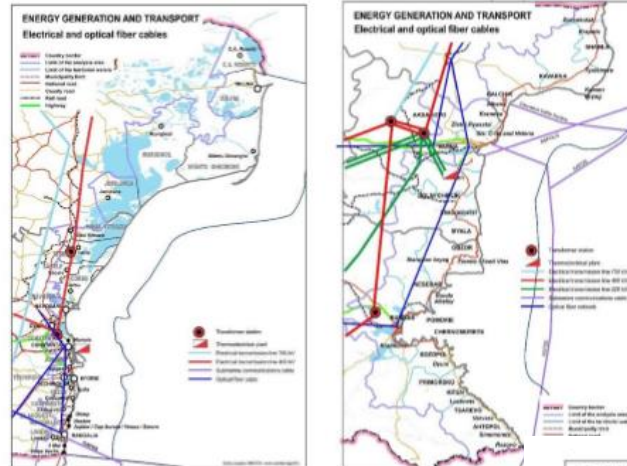


Fig. 3.2.5-9. Waste management (disposal and treatment) a) Romania, b) Bulgaria (original maps, URBAN INCERC)

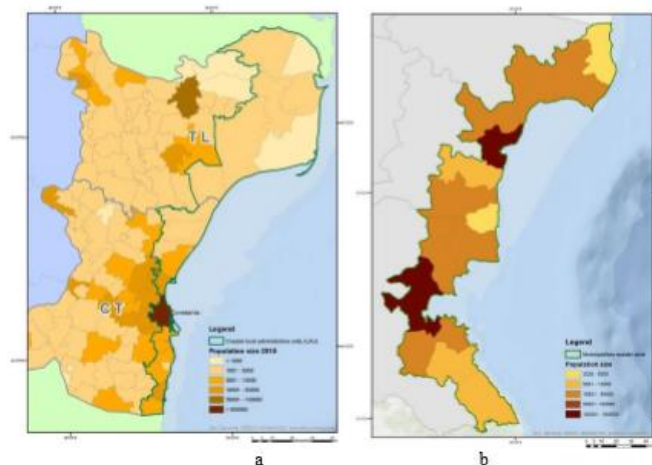


Fig. 4.1.1-1 - Population size (2015) a) Romania b) Bulgaria (original maps, NIMRD)

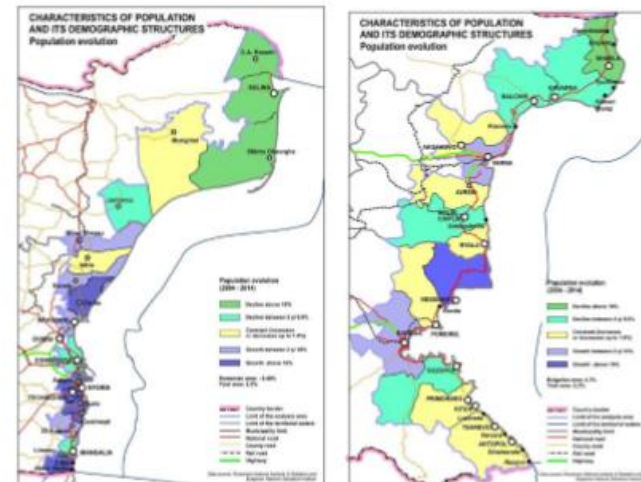
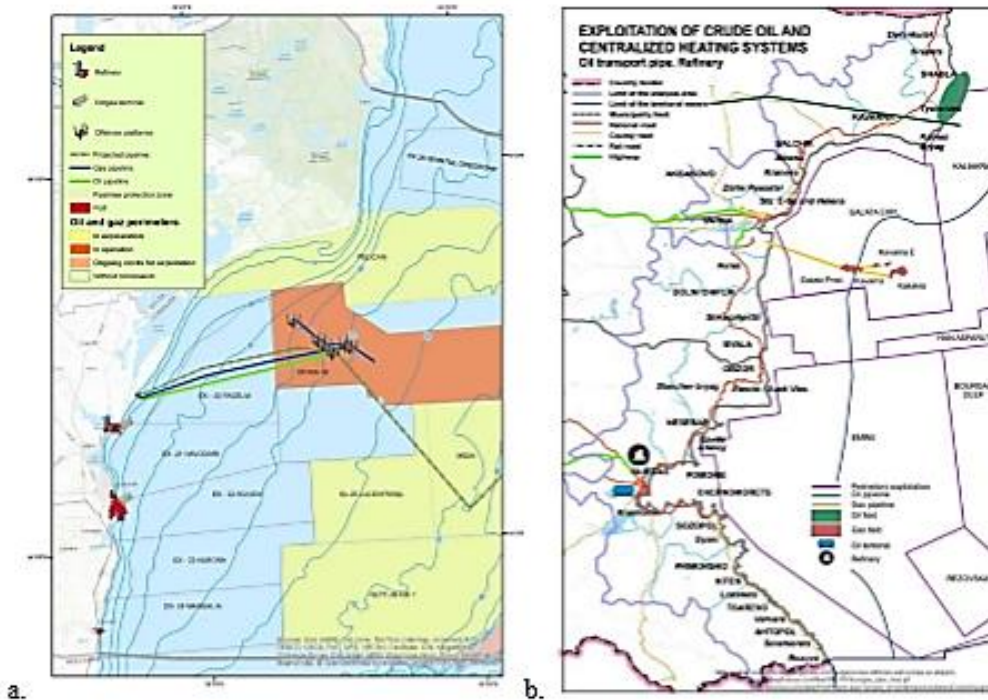


Fig. 4.1.1-2 Population evolution (2004-2014) (original maps, URBAN INCERC)



Data collection/inventory (for analysis, mapping and study cases)

Romania-Bulgaria - sea-coast mapping: more detailed



Lessons Learnt:

- There are only few activities on the sea
- Needs more coordinates

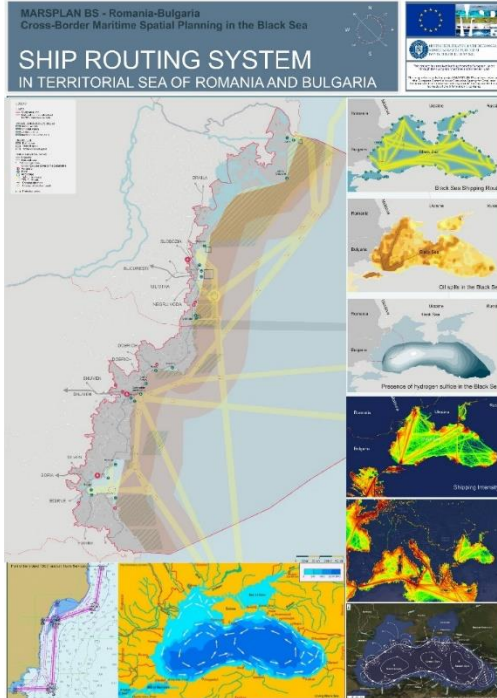




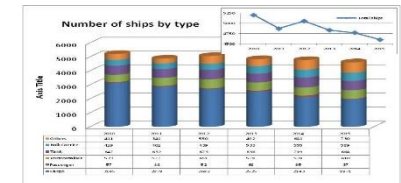
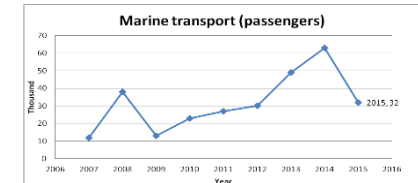
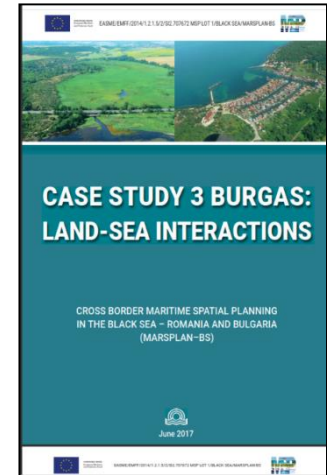
Data collection/inventory (for analysis, mapping and study cases)

Infrastructures maps

Shipping routes



Nr. Crt.	Regular lines name	Regular lines route	Local agent
1	CMA CGM FRENCH LINE	Hamburg - Rotterdam - Antwerpen - Tanger Med - Malta - Gebze - Aviclar - Haydarpasa - Constantza - Gemlik - Aviclar - Gebze - Aliaga - Malta - Tanger - Casablanca - Zeebrugge	CMA CGM ROMANIA SA
2	CMA CGM FRENCH LINE	Constantza - Varna - Ilyicevsk - Samsun - Constantza - Ilyicevsk - Novorossiysk - Samsun - Constantza	CMA CGM ROMANIA SA
3	EBS	Damietta - Port Said - Istanbul - Constanta - Odessa - Chornomorsk - Novorossiysk - Constanta - Istanbul - Port Said - Ashdod - Damietta	ROMAR SHIPPING AGENCY SRL, ORION SHIPPING SRL
4	EMES FEEDERING SAM	Cagliari - Izmir - Marport - Constanta - Odessa - Varna - Constanta - Marport - Cagliari	ROMAR SHIPPING AGENCY SRL
5	EVERGREEN LINE	Pireu - Istanbul - Novorossiysk - Odessa - Constanta - Varna - Pireu	BOSPHORUS SHIPPING AGENCY ROMANIA S.R.L.
6	ICS DANUBE LOGISTICS	Constantza - Giurgulesti - Constanta	C. STEINWEG ROMANIA SRL
7	MSC	Constanta - Tekirdrag - Istanbul - Gebze - Gemlik - Aliaga - Pireu - Gioia Tauro - Trieste - Koper - Ravenna - Venetia - Gioia Tauro - Pireu - Gemlik - Gebze - Tekirdrag - Istanbul - Novorossiysk	MSC ROMANIA SHIPPING SRL BUC.
8	OCEAN THREE	Dalian - Xingang - Kwangyang - Pusan - Shanghai - Ningbo - Chiwan - Port Kelang - Beirut - Izmit - Aviclar - Constanta - Odessa - Kavkaz - Aviclar - Pireu - Port Kelang - Dalian	TEAM LOGISTIC SPECIALISTS SRL, CMA CGM ROMANIA SA, CHINA SHIPPING (ROMANIA) AGENCY CO LTD, FORMAG SRL
9	TBX / IM 2	Pireu - Istanbul - Novorossiysk - Constanta - Varna - Istanbul - Thessaloniki	TEAM LOGISTIC SPECIALISTS SRL, COSCO ROMANIAN SHIPPING AND TRADING S.R.L.
10	TURKON	Kumport - Gemlik - Odessa - Constanta	DTS LOGISTIC SERVICES SRL
11	UNITED FEEDER SERVICES	Pireu - Mardas - Novorossiysk - Odessa - Constanta - Varna - Marda - Pireu	ECONOMU INTERNATIONAL SHIPPING AGENCY S.R.L.



Black Sea shipping intensity

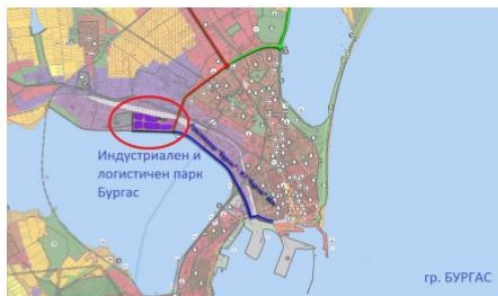


Fig. 5.4.1-2 Industrial and logistic park – Burgas



Fig. 5.4.1-1 – Free Zone Constanta Port

Constanta South free zone has an area of 134.5 hectares, divided into three territory with different sizes. The location gives multiple access and infrastructure facilities in various stages of execution. The mooring berths with depths of 14.5 to 16.5 m offer all necessary facilities for heavy ships: covered and uncovered platforms for storage and operation, exploitation buildings, parking areas, a grain commercial terminal and areas for productive activities (Fig.5.4.1-1).

This free zone that has a transhipment capacity over 700,000-1,000,000 containers per year will become an important European operational center for containers.

- The platform 1A is located in the south part of the port: it has a berth for vessel mooring, processing and distribution activities, rail and road.



Data collection/inventory (for analysis, mapping and study cases)

Pressures on marine environment



Activities related with marine transport that can impact the marine environment are

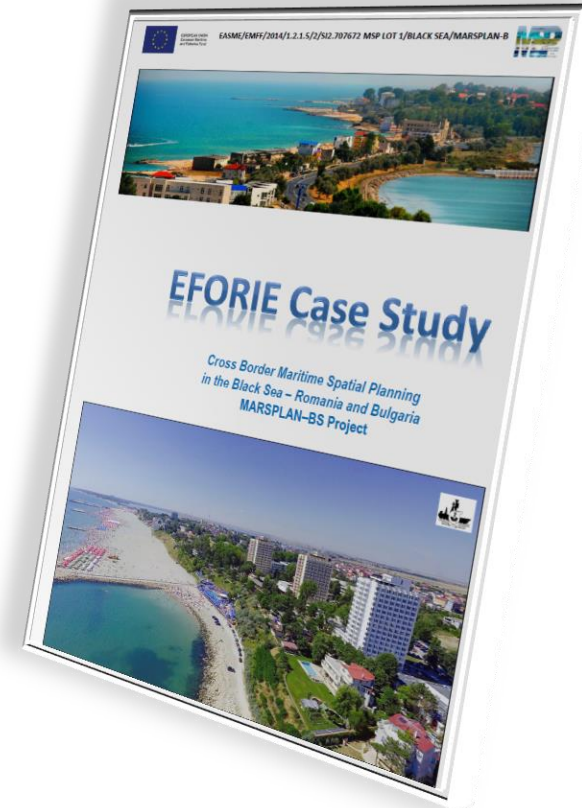
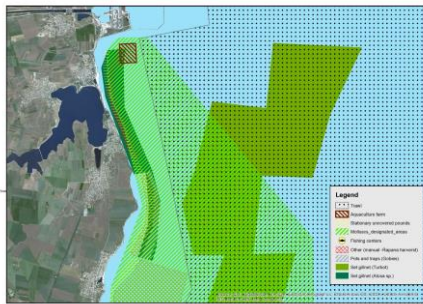
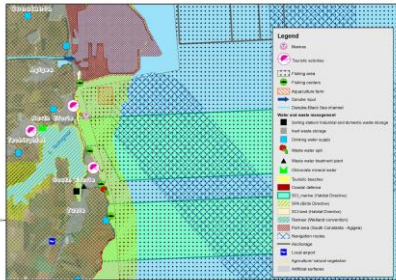
- Port Construction: coastal and sea, including dikes/dams, channels, pipelines, oil terminals
- Marine transport, navigation activities, recreational boating

The effects of marine transport:

- Physical effects:**
- ✓ Disturbance in coastal hydrodynamics and sediments flow
 - ✓ Removing and substrate modification, turbidity etc;
 - ✓ Destruction and fragmentation of habitats;
 - ✓ Dredging and disposal of dredged material;
 - ✓ Noise pollution/ Visual pollution;

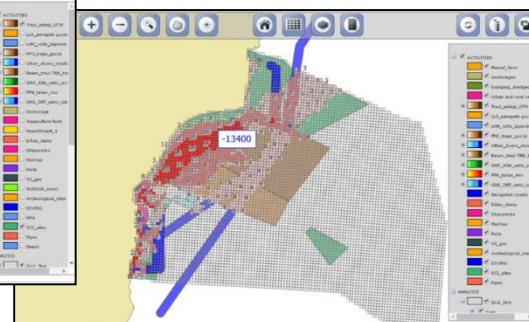
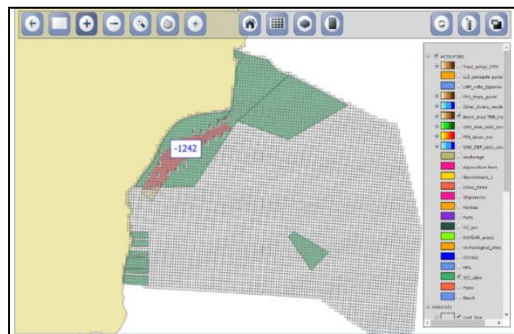
Chemical / biological effects:

- ✓ Contamination of sea water: eg. Nutrients, pesticides; heavy metals, chemical substances, hydrocarbons in case of incidents
- ✓ 2007-2011 was recorded a total of 39 pollution incidents from both ashore and sea: discharges from ships, deficiency at operation systems, accidents during the loading - unloading, sunken vessels – it consisted mainly oil products,
- ✓ Oil and hydrocarbons products - although impact the entire marine ecosystem most affected are seabirds and marine mammals
- Ships generate movements of water masses that changes the flow of nutrients into the water column amplifying eutrophication
- structural changes and decreased of fish resources in coastal areas
- Increase quantities of marine litter
- Introduction of non-indigenous invasive species (fouling and ballast water and sedimentst) – ex. *Rapana venosa*
- Noise pollution – can affect the dolphin behavior, especially *Phocena phocena*



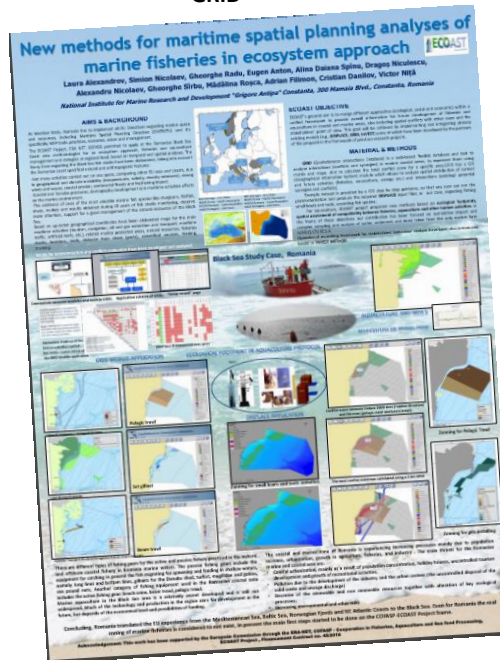
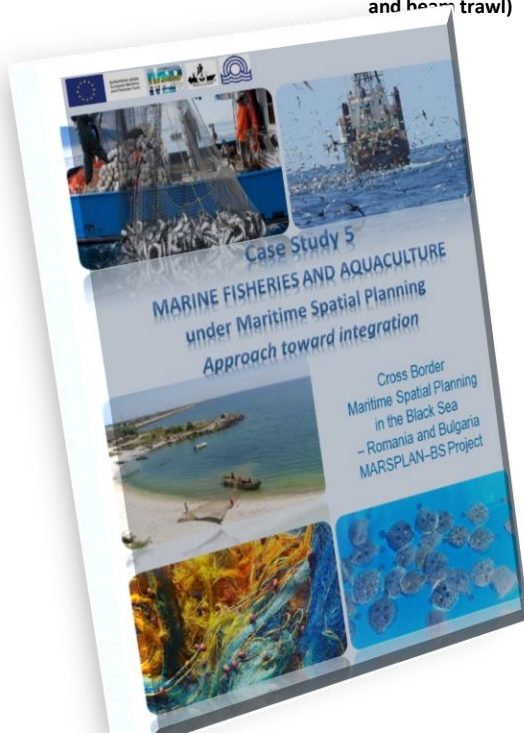


Data collection/inventory (for analysis, mapping and study cases)



Conflict score between Natura 2000 sites
(Habitat Directive) and fisheries (pelagic trawl
and beam trawl)

The total conflict score was calculated using a 2 km
GRID





Data collection/inventory (for analysis, mapping and study cases)



ECONOMIC ANALYSIS

Economic activity	Use of the territory	Natural resources	Qualification of the workforce ^a	Scale of production	Possible benefits	Potential conflicts with other sectors
Shipbuilding / ship repair	Urban areas occupied by water and water objects Transport areas	Water basin (sea) Raw materials - wood, metal	MS / HIS	Large	Utilization offshore potential Export Employment	Tourism Fisheries and aquaculture Processing industry
Offshore technology	Territories occupied by water and water objects Transport areas	Oil and gas fields	HS	Large	Resource independence	Tourism Fisheries and aquaculture Passenger and cargo sea and coastal shipping Services Rehabilitation of land
Passenger sea and coastal transport	Territories occupied by water and water objects Transport areas	Water basin (sea)	MS	Medium	Increasing tourist flow Using alternative means of transport	Shipbuilding / ship repair Offshore technology Cargo sea and coastal water transport Oil and gas extraction
Cargo sea and coastal transport	Territories occupied by water and water objects	Water basin (sea)	MS			

^a According to taxonomy database of EUROSTA codes:
LS - Low qualified (skilled); LIS - Low to medium qualified; MS - Medium qualified
(MARSPLAN-BIS) Interim Activity Report No.3, Study 1.1.1. Version: Final

Economic activity	Use of the territory
	Transport areas
	Territories occupied by water and water objects Transport areas
Tourism accommodation and catering facilities	Urban areas
	Urban areas Agricultural areas Forest areas Protected areas Territories occupied by water and water objects Transport areas
Tourism recreation activities and animation	Urban areas Agricultural areas Forest areas Protected areas Territories occupied by water and water objects Transport areas
Extraction of oil	Territories occupied by water and water objects

Economic activity	Use of the territory
	Transport areas
Gas extraction	Territories occupied by water and water objects Transport areas
Mineral resources	Urban areas Territories occupied by water and water objects
Processing industry and production	Urban areas Territories occupied by water and water objects Transport areas Damaged areas Agricultural areas Forest areas
Fisheries and aquaculture	Territories occupied by water and water objects

Economic activity	Use of the territory
	objects Transport areas
Trade	Plots Territories occupied by water and water objects Transport areas Agricultural areas Forest areas
Services	Urban areas Territories occupied by water and water objects Transport areas protected areas agricultural areas forest areas
Rehabilitation of land / water areas	Damaged areas Protected areas Territories occupied by water and water objects





Data collection/inventory (for analysis, mapping and study cases)



ECONOMIC ANALYSIS based of STAKEHOLDERS involvement Problems identification by Skatch Match Method

Lessons Learnt:

- Needs expertise consultancy
- Needs complex data established from the beginning
- Need integrative approach from governmental level

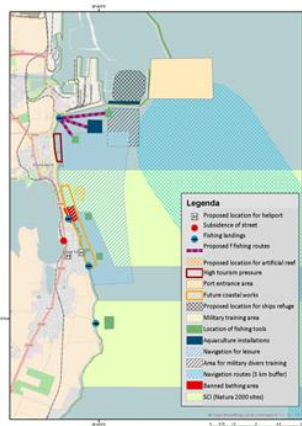
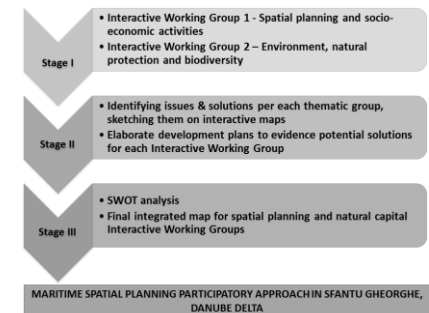


Figure 8 Stakeholders meeting workshop groups and resource layers



Figure 7. SWOT analysis for the Eforie North and South coastal area

Uses	Coastal constructions	Coastal protection	Harbors	Navigation routes	Anchorage	Urban residues	Urban development	Dumping	Pelagic trawl	Stationary uncovered pounds	Pots and traps	Set gillnet	Manual rapana harvesting	Mussel farm	Natura 2000 sites	Refurbish beaches	Ship wrecks	Beach tourism	Recreational diving	Nautical sports	Marinas	Recreational fishing	Military areas
Coastal constructions		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coastal protection			2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbors				3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Navigation routes					5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anchorage						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Urban residues							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Urban development								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dumping									3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Pelagic trawl										4	4	4	4	4	4	4	4	4	4	4	4	4	4
Stationary uncovered pounds											4	4	4	4	4	4	4	4	4	4	4	4	4
Pots and traps												4	4	4	4	4	4	4	4	4	4	4	4
Set gillnet													4	4	4	4	4	4	4	4	4	4	4
Manual Rapana harvesting														3	3	3	3	3	3	3	3	3	3
Mussel farm															3	3	3	3	3	3	3	3	3
Natura 2000 sites																3	3	3	3	3	3	3	3
Refurbish beaches																	0	5	0	0	0	0	0
Ship wrecks																		0	4	2	0	0	0
Beach tourism																			0	2	0	0	0
Recreational diving																				2	0	0	0
Nautical sports																					2	0	0
Marinas																						0	0
Recreational fishing																							0
Military areas																							0





Data collection/inventory (for analysis, mapping and study cases)



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Tourism *versus* Pressures from the coast



9 sector fiches have been produced

- ✓ Fisheries;
- ✓ Marine aquaculture;
- ✓ Shipping;
- ✓ Oil & Gas production;
- ✓ Offshore wind energy;
- ✓ Tidal & wave energy;
- ✓ Marine aggregates;
- ✓ Coastal tourism;
- ✓ Pipelines & cables.

Coastal and Maritime Tourism



Coastal and Maritime Tourism

BASIC FACTS

- Gross value added: € 183 billion^[1]
- State of the sector: Mature and growing^[2]
- Presence across sea basins: Dispersed throughout all sea basins, strong in the Mediterranean region and growing around the Baltic Sea and Atlantic Ocean^[3]
- Land-sea interaction present^[4]
- Strong seasonality^[5]
- Lifetime of installations depends on sub-sector
- Semi-compatible with most uses^[6]

WHAT ARE THE PRESENT SPATIAL NEEDS OF THE COASTAL AND MARITIME TOURISM SECTOR?

Depending on the sub-sector, maritime and coastal tourism is both a **linear and area based activity**. In most cases maritime activities take place along the coastline as well as between the shore and on-water tourism activity areas^[7], while for instance diving, snorkelling and underwater cultural heritage are place-based activities. The distance to shore is typically between zero and few km. Water depth depends on sub-sector needs and might be a crucial element for certain activities (e.g. water-based activities such as boating, yachting, nautical sports).

Although mass tourism is likely to stabilize or even decline in future, the spatial implication of this type of tourism will remain the same: direct use of sea space mainly along the coast, impacts on the sea environment and water quality in particular and environmental pressure on land are among the factors deserving special attention within MSP processes^[8].

WHICH ANTICIPATED FUTURE DEVELOPMENTS OF THE INDUSTRY ARE RELEVANT TO MSP?

Continued Growth: The expected continued growth in coastal tourism, both in terms of nights spent in coastal regions but also in number of tourists, has implications on onshore spatial planning mainly through the construction of new infrastructure and ports^[9]. Thus, demand for **additional infrastructure and services/activities** is likely to increase with the growing success of high profile tourism, characterised by a relatively high volume of visitors, high level of quality and unique value^[10].

Growth of so-called niche tourism (characterised by specific added-value services or locations) will strongly depend on holiday accommodation (e.g. accommodation in areas with rare sea birds). In turn, niche tourism is likely to impact areas with limited facilities and of high sensitivity, hence requiring specific infrastructures and innovative, yet spatially limited, solutions in e.g. natural and protected areas^[11].

Download full Sector Fiche

Back to all sectors

Practices related to Coastal and Maritime Tourism

- Adriatic Atlas to support ICZM and MSP
- Assessment of coastal pressures
- Pressures and their impacts on coastal ecosystems - gap analysis
- ECoA-base marine vulnerability assessment as a basis for MSP in Montenegro

Projects related to Coastal and Maritime Tourism

- AMPAMED - Areas Marinas Protegidas del Mediterráneo
- BalcoRIM - Baltic Sea Region Integrated Maritime Cultural Heritage Management
- CO-EVOLVE - Promoting the co-evolution of human activities and natural systems for the development of sustainable coastal and maritime tourism
- Integrated Coastal Zone Management in the Baltic Sea Region

Fig. 2.36.a,b. Population density during summer season



a.



b.

Industrial Sector Interrelation evaluation

Natural growth has remained in negative trend since 1991, the number of births is lower than that of deaths compared to other adjacent areas, where it is positive (Fig. 2.37).



2018:

Study on Conflicts

Spatial conflicts in MSP: How to identify and address conflicting maritime spatial demands?

Focus on **cross-sectoral conflicts** with a **spatial** dimension, at national, sub-national & cross-border scale

Based on **real-life examples** of conflicts, either from statutory MSP processes or from cross-border MSP projects

Study on Cross-border consultations

How to conduct transnational consultation on MSP Planning processes within the EU and with neighbours to the EU?

Investigates how a Member State should **consult** with their neighbours to ensure **coherent** plans.

Drawing from previous and on-going work to clearly identify best practice for a cross-border consultation process, presented through a conceptual framework for designing and conducting a consultation process design.



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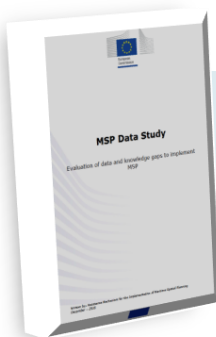
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Technical Studies: Generating Knowledge



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Data for MSP (2017)

- Analysis of planner's data needs and knowledge gaps
- Overview of marine data categories and operational infrastructures relevant for MSP processes
- Review of EU projects and initiatives

MSP for Blue Growth (2018)

- Methodology for developing a vision
- Methodology to investigate current and future potential spatial demands of key maritime sectors
- Manual on MSP indicators for sustainable Blue Growth



MSP Platform FAQ Section provides 'short-cuts' to practical information for MSP data issues and Blue Growth topics



Data collection/inventory (for analysis, mapping and study cases)



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Data for MSP (2017)

Study on Data and Knowledge Gaps to implement MSP

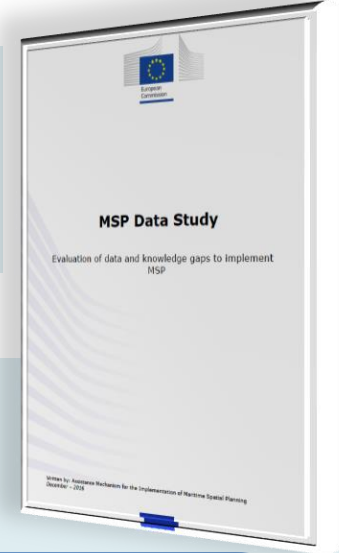
1st technical study MSP Assistance Mechanism

Evaluation of data and knowledge gaps to
implement MSP

- Desk research
- Analysis of planners' needs
- Interviews with data specialists in 16 EU MS

Outcomes →

- Different styles of planning, different types of evidence
- Each country has different resources
- Countries are using similar data categories
- Common information gaps in aggregated data
- Issues relating to the interpretation of data – promote more exchange on related practices
- Need for spatial evaluation tools, e.g. economic impact analysis, social impact analysis of marine use constellations.



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Data collection/inventory (for analysis, mapping and study cases)

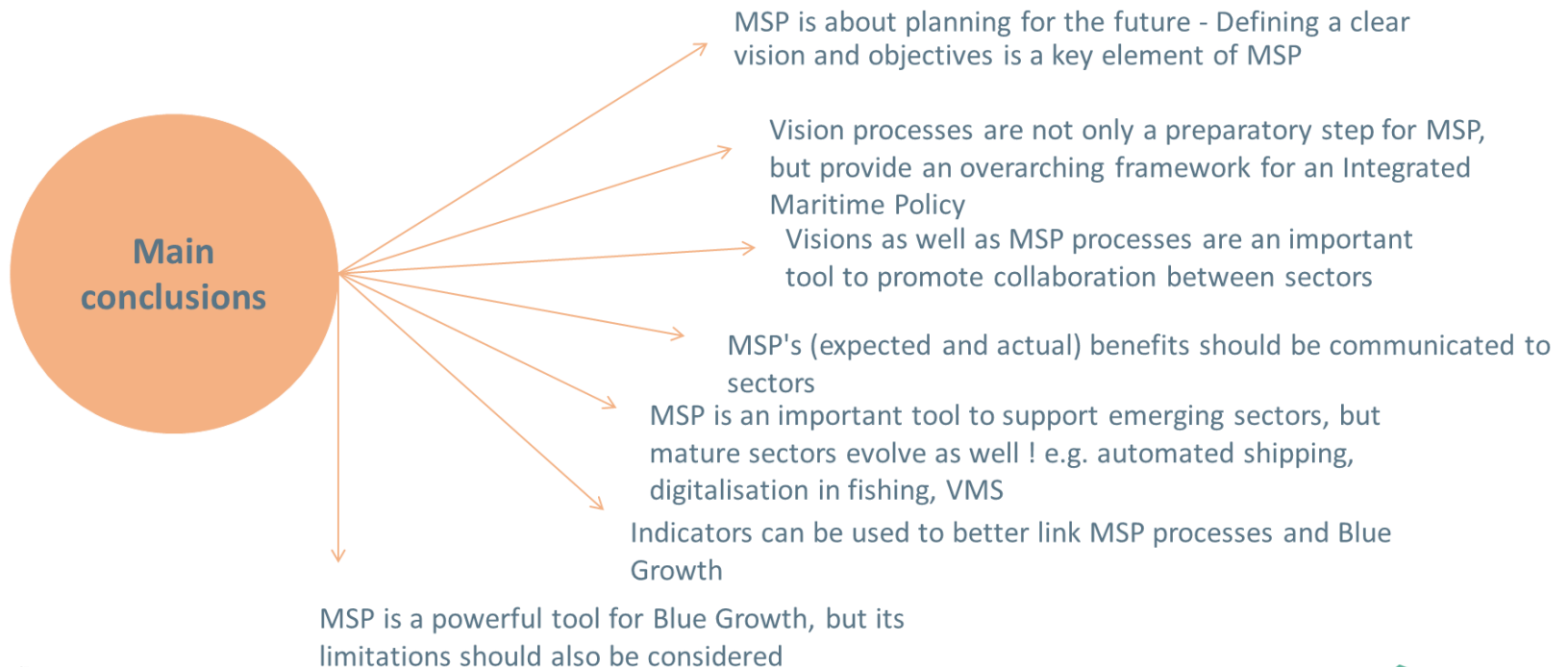


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Main Conclusions

Main conclusions – MSP for Blue Growth Study



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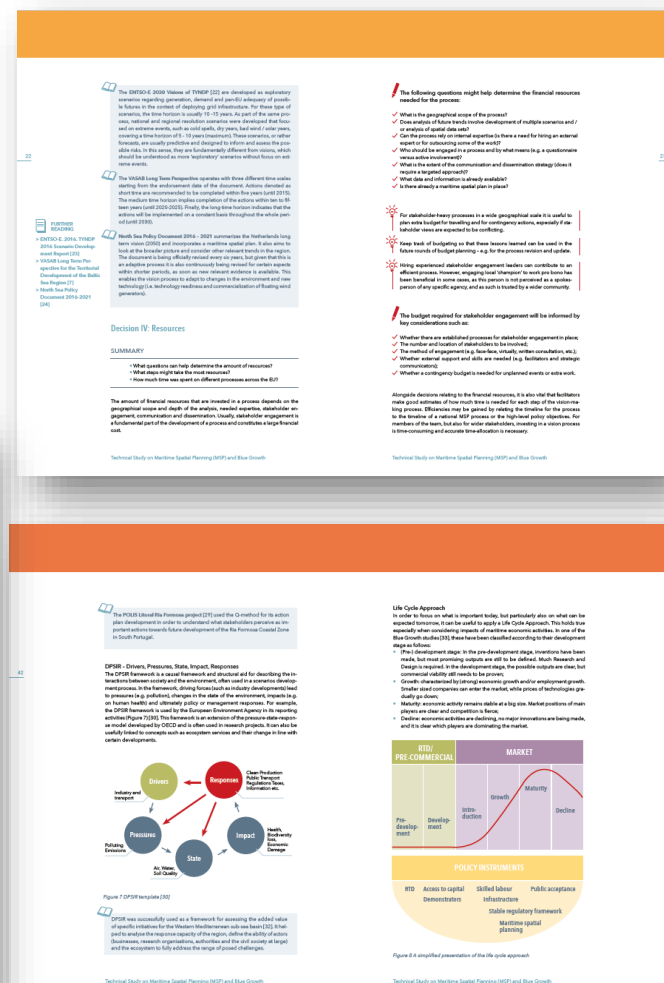
Vision Handbook Publication



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Thank you for attention!