Studies to support the development of sea basin cooperation in the Mediterranean, Adriatic and Ionian, and Black Sea

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1. Selection of the most important regions

The selection of the most important NUTS 2 in each country relies on the identification of the **maritime role** of each NUTS 2 in the related country. For this purpose, **four key sectors** have been identified which could be considered as "representative of the maritime dimension of the region at stake". Therefore, to each of the four sectors of each region, it is proposed to assign a score (from 0 to 10), which allows to assess the maritime role of each region in a given country.

The three sectors are:

- **Water transport**, which includes freight and passenger traffic; for this specific item, "Number of persons employed" at NUTS 2 level has been taken into account;
- **Coastal tourism**, whose indicator adopted is the number of bed places of coastal NUTS 3 level for a given NUTS 2. For this sector, A001 Collective tourist accommodation establishments has been taken into account.
- **Fishing**, for which the Gross tonnage (GT, column "Ton Ref" in the file downloaded) at NUTS 2 level will be taken into account (from the EU Fleet Register).
- **Aquaculture**, for which income by NUTS 2 has been taken into account[1].

According to the findings of the Blue Growth study, these four sectors accounts to more than 70% of the EU maritime GVA and over than 85% of the EU employees in maritime activities.

The score for each of the 4 sectors for each NUTS 2 has been assigned as specified below:

- **Water transport**: the number of persons employed of the NUTS 2 in question has been divided by the total number of persons employed in the related country; the result has been multiplied by 10.
- **Coastal tourism**: the number of bed places of the coastal area in the NUTS 2 in question has been divided by the total number of bed places of the coastal area in the related country; the result has been multiplied by 10;
- **Fishing**: the total GT of the NUTS 2 in question has been divided by the total GT in the related country; the result has been multiplied by 10.
- **Aquaculture:** income of aquaculture sector by NUTS 2 has been divided by the total income generated by aquaculture in the related country; the result has been multiplied by 10.

The final score consist in the sum of the scores of the four sectors. Highest ranking regions have been selected as "most important regions".

Table 1 - Definition of the maritime dimension of coastal Greece

	Water transport (Number of persons) *Persons*	**Coastal tourism** (bed places in coastal NUTS 3) *Unit*	**Fishing** (Gross Tonnage)	**Aquaculture** (Income) *Million euro*
Anatoliki Makedonia Thraki	941	27.408	6.792,32	3,0
Kentriki Makedonia	418	141.074	14.085,09	76,6
Thessalia	287	44.749	3.328,64	0,7
Ipeiros	109	20.978	1.054,85	15,1
Ionia Nisia	791	163.287	3.849,15	14,2
Dytiki Ellada	125	28.372	2981,01	12,0
Sterea Ellada	993	46.069	8.433,11	28,7
Peloponnisos	142	57.004	4.641,47	13,6
Attiki	12.595	71.422	13.565,29	8,3
Voreio Aigaio	92	29.563	6.287,34	10,0
Notio Aigaio	92	245.624	9.569,46	9,3
Kriti	1,282	216.171	3.761,69	0,9
Total	20.404	1.091.721	78.349,42	192,3

[1] Source: P. Salz, 2007, Regional dependency on fisheries

Table 2 - Ranking order of coastal Greece

`	Water transport	Coastal tourism	Fishing	Aquaculture	TOTAL
Attiki	6,17	0,65	1,73	0,43	8,99
Kentriki Makedonia	0,20	1,29	1,79	3,99	7,28
Notio Aigaio	0,63	2,25	1,2	0,47	4,57
Kriti	1,29	1,98	0,48	0,05	3,80
Sterea Ellada	0,49	0,42	1,07	1,49	3,48
Ionia Nisia	0,39	1,50	0,49	0,74	3,11
Peloponnisos	0,07	0,52	0,59	0,71	1,89
Anatoliki Makedonia, Thraki	0,46	0,25	0,86	0,16	1,74
Voreio Aigaio	0,05	0,27	0,80	0,52	1,64
Dytiki Ellada	0,06	0,26	0,48	0,62	1,33
Ipeiros	0,05	0,19	0,13	0,79	1,17
Thessalia	0,14	0,41	0,42	0,04	1,01

As explained in the Country fiche main report, the breakdown of all 29 activities at regional level has been carried out only for Attica, given its pivotal importance in the Greek blue economy. In this Annex, short descriptions of main marine and maritime activities have been reported for the other most important regions, namely: Kentriki Makedonia, Notio Aigaio and Kriti. Excepted where expressly mentioned, data and information reported in these short analyses are mainly based on expert estimates, due to data unavailability at NUTS 2 (or even more disaggregated) level.

➢ *Kentriki Makedonia (Central Makedonia, GR12)*

Coastal Tourism

Kentriki Makedonia is among the most popular tourist regions for domestic tourism with 18 million nights spent in 2011, representing 18% of the national share[2]. In 2011, tourist arrivals reached 1,1 million guests (7,3% of national total) according to the Hellenic Statistical Authority (ELSTAT, 2012).

Thessaloniki and Chalkidiki are among the most well known tourist destinations of the region, characterized by high quality infrastructures and services, multiple attractions (archeological places, museums, traditional villages etc) and natural environment. Infrastructural interventions, especially in the road network, facilitate the easy access to the Region. An upward trend in tourist arrivals has been observed in recent years, mainly from Russian and Balkan countries.

Fishing

In 2011, Kentriki Makedonia was ranked first at a national level in terms of number of vessels with 1.880 vessels and a capacity representing almost 18% of national fleet.

Aquaculture

There are approximately 158 units, most of which cultivate mussels, while total annual production reaches 17.000 tonnes.

[2] http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-HA-13-001/EN/KS-HA-13-001-EN.PDF

Maritime Transport

The port of Thessaloniki is the most important port of the Region and the second container handling port in Greece. The port is located near the International airport of 'Macedonia' and the railway station. Port Authority of Thessaloniki is employing more than 400 employees. In 2011, the port throughput was 16 million tonnes of cargo, 3.000 ship calls and 220.000 passengers. Cargo terminal serves as major transshipment hub in the Aegean-Black sea area, with oil and container to be the most likely activities for future development.

Cruise Tourism

Thessaloniki is the major cruise port of the Region. In 2012, the destination received 11 calls and 8.000 passengers. The development of the sector is a strategic priority.

Notio Aigaio (South Aegean, GR 42)

Coastal Tourism

Notio Agaio, - which consists in the Cyclades and Dodecanese) is among the top 20 EU-27 tourist regions (17th place), with 49 million nights spend in 2011, representing 31% of national total. In 2012, tourist arrivals reached 2,5 million (17% of national total- ELSTAT, 2012). Tourism is the main activity for the Region and, thus, there is high concentration of bed capacity. 18,4% of the total national hotel beds are located in Dodekanisa and 6,3% in Cyclades (SETE,2012). Average occupancy rate was almost 90% in 2012. Regarding, employment in the hotel sector, Notio Aigaio is the only region presenting a steadily increasing trend since 2008. Based on data from the Hellenic Chamber of Hotels, during August (2012) over 30.850 people were employed in the hotel sector.

Connectivity and more particularly maritime connections are of core importance for the further development of the sector and the viability of the Region. In this context seasonality, regularity of itineraries and transport costs are factors that directly affect the tourism flows and its further development. In terms of infrastructures there are deficiencies in port facilities, while specific interventions are required in the road network.

Fishing

Fishing is a dynamic activity in the region due to the number of persons employed in the sector. However, it should be noted that fishing activity is declining due to a decrease in fishery catches. Notio Aigaio is the second region in terms of number of vessels. The region's fleet consisted in 2.203 vessels of coastal fishing. It is estimated that the sector employs 4.700 people, while the average catches reaches 9.000 tonnes per year. The fishing sector faces major challenges such as: the lack of dedicated infrastructures, illegal fishing activity and difficulty to transport production to the main commercial centers.

Aquaculture

Notio Aigaio ranks 3rd in terms of national production of farmed products, reaching 8.000 tonnes. There are 27 units in the region (25 located in Dodecanese and 2 in Cyclades). Regional sector is tackling some contemporary challenges connected with MSP, transport and trading of farmed product.

Maritime Transport

Coastal connections are vital for the region due to its insularity character and its distance from the mainland. Coastal shipping undertakes the greatest part of tourist flows to island regions. In 2011, the number of passengers transported was 6.884 thousand people. Respectively, maritime transport of freight was estimated to 1.849 thousand tonnes.

Cruise Tourism

The region of Notio Aigaio has some of the most famous cruise destinations of the Mediterranean. Specifically, these are Santorini and Mykonos (located in the Cyclades Complex) and Rhodes (in the Dodecanese complex). In 2012, Santorini received more than 700 cruise calls and almost 840.000 cruise passengers., whereas Mykonos 585 cruise calls and 658.000 passengers and Rhodes 450 calls and 472.000 passengers. However, the region has many potential in further developing cruise tourism due to its multiple destinations (many small and medium size islands with many shore attractions and diversified environment, which could enter niche markets). Regarding the marquee destinations of the Region, these are currently facing “carrying capacity issues”, which require specific interventions for handling the large number of passengers while maintaining the quality of the environment and a certain level of quality both for passengers and the residents.

➢ *Kriti (Crete, GR 43)*

Coastal Tourim

Kriti region consists in the island of Crete and a number of smaller surrounding islands. Crete is the largest island in the Greek territory and the third largest in the Mediterranean, with a total extend of 8.335 km2. Kriti is among the top 20 tourist regions of EU placed in 15th place. Kriti received more than 2,7 million tourists in 2012 (19% of total arrivals).

Regarding infrastructures, Crete has three airports (two of them international) and six ports, serving coastal shipping, cruise tourism and cargo shipping.

The hotel beds in the Region represent 21,4% of national capacity, while 30% of them are 5 stars hotels. Average occupancy rate in hotels was almost 87% (decrease by 3,3% from 2012). Regarding, employment, the hotels in Kriti employed 27.500 people (August 2012 data). Kriti has a strong hospitality identity and regional policy makers invest in new technologies and applications for promoting local production and improving the tourism experience.

Fishing

Fishing is a traditional activity. In 2005, the fishing fleet consisted of 1.000 vessels which a total capacity of 4.320[3] GT, representing 5,4% of national fleet. In 2011, this figure has decreased to 3.761 GT (4,8% of national total) while the quantity of catches in the region was estimated to 1,7 tonnes (ELSTAT, 2011).

Aquaculture

In Kriti, the Hellenic Center for Marine Research conducts studies and applied research in the field and is the center of aquaculture research. The regional sector –compared to other regions- is limited and only a small number of aquaculture units are located (3).

Maritime Transport

Kriti has good connections with Piraeus, but it lacks of permanent connections with other neighboring destinations throughout the year. In 2011 2,7 million people were transported to the island. Maritime transport of freight for 2011 was around 3 million tonnes. Maritime connections are very important for Kriti not only due to tourism but also due to the agricultural production and the export orientation of local production.

[3] http://faolex.fao.org/docs/pdf/gre110021.pdf

Cruise Tourism

Iraklio is the most famous destination in the Region (156 cruise calls and 216.000 passengers during 2012) followed by Chania (54 calls-130.000 passengers) and Ag. Nikolao (71 calls – 48.000 passengers). Iraklio has followed a specific strategic plan for restructuring the profile of regional sector attracting also home porting. It is stressed that the port Authority of Heraklio received in 2012 the second award of “ Port of the Year “from the international cruise magazine “Seatrade Insider”.

2. Indicative size of all marine and maritime activities

Table 3 - Indicative size of all marine and maritime activities

Function/activity		GVA (EUR, billion)	Employment (*1000)	Score	Source & Reference year
0. Other sectors					
0.1	Shipbuilding and ship repair	0,267	6,7	4,7	ELSTAT,2010
0.2	Water projects	0,11	2,5	1,83	ELSTAT,2010
1. Maritime transport					
1.1	Deep-sea shipping	6,7	24,3	45,6	EUROSTAT, ELSTAT,2010*
1.2	Short-sea shipping (incl. Ro-Ro)	3,63	17,5	20,2	EUROSTAT, ELSTAT,2010*
1.3	Passenger ferry services	1,69	9,1	13	EUROSTAT, ELSTAT,2010*
1.4	Inland waterway transport	0	0	0	EUROSTAT,2010
2. Food, nutrition, health and eco-system services					
2.1	Fishing for human consumption	0,84	30,15	19,3	JRC 2012, ELSTAT,2010*
2.2	Fishing for animal feeding	0	0	0	EUROSTA,2010
2.3	Marine aquaculture	0,45	3,6	4,09	ELSTAT,2010*
2.4	Blue biotechnology	----	----	----	----
2.5	Agriculture on saline soils	0,62	123,4	64,8[4]	EUROSTAT,2010 JRC,2012
3. Energy and raw materials					
3.1	Offshore oil and gas	----	----	----	----
3.2	Offshore wind	----	----	----	----
3.3	Ocean renewable energy	----	----	----	----
3.4	Carbon capture and storage	----	----	----	----
3.5	Aggregates mining (sand, gravel, etc.)	----	----	----	----
3.6	Marine minerals mining	----	----	----	----
3.7	Securing fresh water supply (desalination)	0,0068	0,12	0,085	ELSTAT,2010*
4. Leisure, working and living					
4.1	Coastal tourism	6,9	82,7	75,3	EUROSTAT,2010 ELSTAT,2010*
4.2	Yachting and marinas	0,21	8,9	5,3	EUROSTAT,2010*[5]
4.3	Cruise tourism	1,6	6,4	12,4	ELSTAT,2010* ECC,2010
5. Coastal protection					
5.1	Protection against flooding and erosion	0,014	----	0,07	----
5.2	Preventing salt water intrusion	----	----	----	----
5.3	Protection of habitats	----	----	----	----
6. Maritime monitoring and surveillance					
6.1	Traceability and security of goods supply chains	----	----	----	----
6.2	Prevent and protect against illegal movement of people and goods	----	----	----	----
6.3	Environmental monitoring	----	----	----	----

*Elaboration of data

[4] GVA and employment was estimated based on the percentage of agriculture on saline soils provided by JRC, since there are no available data at national level and thus not included to the largest marine and maritime economic activities

[5] Diakomihalis, 2008

3. Relative growth of all marine and maritime activities

Table 4 - Relative growth of all marine and maritime activities

	Function/activity	GVA (CAGR)	Employment (CAGR)	Score	Source & Reference year
0. Other sectors					
0.1	Shipbuilding and ship repair	-23,05%	-9,95%	-16,5	ELSTAT (2010)
0.2	Water projects	35,1%	-4,1%	15,5	ELSTAT (2010)
1. Maritime transport					
1.1	Deep-sea shipping	-10%	-0,08%	-5,5	EUROSTAT, ELSTAT (2010)*
1.2	Short-sea shipping (incl. Ro-Ro)	-11,6%	-3,49%	-7,54	EUROSTAT, ELSTAT (2010)*
1.3	Passenger ferry services	-12,03%	-3,19%	-7,6	EUROSTAT, ELSTAT (2010)*
1.4	Inland waterway transport	0	0	0	EUROSTAT (2010)
2. Food, nutrition, health and eco-system services					
2.1	Fishing for human consumption	0,7%	1,53%	1,1	JRC 2012, ELSTAT (2010)*
2.2	Fishing for animal feeding	0	0	0	EUROSTA (2010)
2.3	Marine aquaculture	12,4%	-8,01%	2,2	ELSTAT (2010)*
2.4	Blue biotechnology	----	----	----	----
2.5	Agriculture on saline soils	3,44%	-11,08%	-3,8	EUROSTAT (2010) JRC (2012)
3. Energy and raw materials					
3.1	Offshore oil and gas	----	----	----	----
3.2	Offshore wind	----	----	----	----
3.3	Ocean renewable energy	----	----	----	----
3.4	Carbon capture and storage	----	----	----	----
3.5	Aggregates mining (sand, gravel, etc.)	----	----	----	----
3.6	Marine minerals mining	----	----	----	----
3.7	Securing fresh water supply (desalination)	1,18%	-1,92%	-0,36	ELSTAT (2010)*
4. Leisure, working and living					
4.1	Coastal tourism	7,3%	-0,89%	3,2	EUROSTAT (2010) ELSTAT (2010)*
4.2	Yachting and marinas	-2,5%	-1,6%	-2,08	EUROSTAT (2010)*[6]
4.3	Cruise tourism	-11,8%	25,9%	7,05	ELSTAT (2010)* ECC (2010)
5. Coastal protection					
5.1	Protection against flooding and erosion	----	----	----	----
5.2	Preventing salt water intrusion	----	----	----	----
5.3	Protection of habitats	----	----	----	----
6. Maritime monitoring and surveillance					
6.1	Traceability and security of goods supply chains	----	----	----	----
6.2	Prevent and protect against illegal movement of people and goods	----	----	----	----
6.3	Environmental monitoring	----	----	----	----

[6] Diakomihalis, 2008

4. Assessment of future potential for all marine and maritime activities

Table 5 – Assessment of future potential for all marine and maritime activities

Function	Activity	Innovativeness	Competitiveness	Employment	Policy relevance	Spill-over effects	Sustainability	Overall score
0. Other sectors	0.1 Shipbuilding and ship repair	0	+	+	0	+	0	+++
	0.2 Water projects	0	0	+	0	+	+	+++
1. Maritime transport	1.1 Deep-sea shipping	+	+	+	+	+	+	++++++
	1.2 Short-sea shipping (incl. RoRo)	0	+	+	0	+	+	++++
	1.3 Passenger ferry services	0	+	+	0	0	+	+++
	1.4 Inland waterway transport	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-
2. Food, nutrition, health and eco-system services	2.1 Fishing for human consumption	-	+	+	+	+	0	+++
	2.2 Fishing for animal feeding	?	?	?	?	?	?	?
	2.3 Marine aquaculture	+	+	+	+	+	+	++++++
	2.4 Blue Biotechnology	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	2.5 Agriculture on saline soils	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3. Energy and raw materials	3.1 Offshore oil and gas	0	+	+	0	0	+	+++
	3.2 Offshore wind	+	0	0	+	+	+	++++
	3.3 Ocean renewable energy (wave, tidal, OTEC, thermal, biofuels, etc.)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	3.4 Carbon capture and storage	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	3.5 Aggregates mining (sand, gravel, etc.)	0	?	+	?	?	+	++
	3.6 Marine minerals mining	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3.7 Securing fresh water supply (desalination)	+	0	0	0	0	+	++
4. Leisure, working and living	4.1 Coastal tourism	0	+	+	+	+	+	+++++
	4.2 Yachting and marinas	0	+	+	0	+	+	++++
	4.3 Cruise tourism	0	+	+	+	+	+	+++++
	4.4 Working	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4.5 Living	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5. Coastal protection	5.1 Protection against flooding and erosion	?	?	?	+	0	+	++
	5.2 Preventing salt water intrusion	?	?	?	+	0	+	++
	5.3 Protection of habitats	?	?	?	+	?	+	++
6. Maritime monitoring and surveillance	6.1 Traceability and security of goods supply chains	?	?	+	0	+	0	++
	6.2 Prevent and protect against illegal movement of people and goods	0	+	+	+	0	0	+++
	6.3 Environmental monitoring	+	0	0	+	0	+	+++

5. Growth drivers and barriers to growth

5.1 Results of the benchmark analysis

Table 6 - MARINE AQUACULTURE: results of the benchmark analysis

MARINE AQUACULTURE[7]	Growth drivers	Barriers to growth
Maritime research	- Institute of Aquaculture within the Hellenic Center for Maritime Research; - Significant number of research programs focused on aquaculture;	----
Development and innovation	- Significant number of applied research in the field of aquaculture ; - Involvement of the private sector in pilot projects; - Certifications;	Difficulties to obtain licences
Access to finance	- Leading companies listed in the Athens Stock Exchange; - Incentives for investors; - Establishment of a national agency for investment; - Possibility of public funding through the EFF;	- Difficult access to private funding for small operators; - Red tape for financial public support;
Smart infrastructure	Improvement of the road network;	----
Maritime clusters	No related maritime cluster	No related maritime cluster
Education, needs in training and skills	Improvement of the basic level of education for the new generation entering the labour market; Specialised degrees in universities and technological educational institutes;	Level of education slightly below EU standards;
Maritime spatial planning	----	No clear line regarding the integration of aquaculture in maritime spatial planning;
Integrated local development	----	Not included in integrated local development initiatives;
Public engagement	- Industry recognised as a strategic sector; - Research; Promotion;	Red tape

[7] Greece has been identified as the benchmark instance for Marine aquaculture. Therefore, we report below growth drivers and barriers to growth as identified in the benchmark instance.

Table 7 - DEEP-SEA SHIPPING: results of the benchmark analysis

DEEP-SEA SHIPPING[8]	Growth drivers	Barriers to growth
Maritime research	Experienced Laboratories in the Universities of the Aegean and of Piraeus(shipping departments) the National Technical University of Athens, Private initiatives and Funds for Maritime Research (especially through Scholarships)	- Only State Universities show a systematic and continuous support for Maritime Research. These Universities are now poorly funded due to the ongoing economic crisis of the country - Underdeveloped private institutes or Bodies of Maritime/ Marine education or research - Extremely limited and not well organized or systematic private funding for maritime research.
Development and innovation	Strong links with international classification societies and ship building/ ship repair yards of international calibre lead Greek Ship-owners to possess today not only a strong modern fleet but also a wealth of knowledge on all aspects of shipbuilding and maintenance technology	The Greek ship repair industry is in an unprecedented crisis due to various internal and external reasons. Greek owners seem distracted by this uncompetitive and somewhat problematic sector that cannot be supported anymore by State funding.
Access to finance	- Bank loans. Good relations with bankers. New developing and constructive relations with Chinese banks. - Stock exchange markets(NYSE, NASDAQ)	- Over exposure to the banking system and its shortcomings - The ongoing crisis in the banking sector of Greece and Europe and the curtailing of new loans do not allow new players to appear and older ones with small fleets to modernize their vessels. - The conventional nature and strategy of most Greek Ship-owners do not allow them to explore new methods of financing.
Smart infrastructure	- Geographic location of ports in Greece - Good general infrastructures (energy, tlc, etc.)	- Insufficient rail and road public transport - Present political instability in Greece and the Balkan states - Fragile diplomatic relations of Greece and is neighbouring States - Escalating corruption and white collar crime in the country, mostly due to the ongoing crisis - Major strikes and social unrest
Maritime clusters	- Large number of internationally acclaimed companies - Favourable tax regime - Strong international networks - Excellent geographical vicinity of companies in Attica - Major international exhibitions, conferences and Fairs held systematically in Attica	- Absence of local demand of its services - Weak linkage with related and supporting industries - Present financial instability and insecurity of the wider maritime cluster (not including ship owners/ managers) - Weak support by the State in the support and creation of a national body that would organize the country's maritime clusters
Education, needs in training and skills	- Well respected public and State funded Universities and Maritime Academies. - Public and Private Maritime Museums - State Funded continuous education and accreditation centres (i.e. KESEN)	- Poorly funded State Universities - Limited private initiatives that do not enjoy the support of the Greek State - Merchant Marine Academies are until today only public and State and dependent from the Ministry Funded thus experiencing enormous difficulties both in funding and technological and educational modernization - Public Maritime Museums are underfunded - Continuous education and accreditation in the Marine Community is managed by the Greek State with all expected difficulties and shortcomings
Maritime spatial planning	Not considered as necessary at this stage, given the lack of real needs and the long, extensive coastline of the country	----

[8] Greece has been identified as the benchmark instance for Deep-sea shipping. Therefore, we report below growth drivers and barriers to growth as identified in the benchmark instance.

DEEP-SEA SHIPPING[8]	Growth drivers	Barriers to growth
Integrated local development	- Major contributions by ship-owners in their l homelands including: Property development, Hotel/ Tourism expansion - Ship-owners have also mainly supported through their financial involvement the following sectors: Banking, Airline Industry, Coastal Shipping - Ship-owners have also supported through non for profit activities: Centres for education, Health management and Hospitals Centres of research, art, sports and education (i.e. Museums, Concert Halls, Art Establishments, Sports facilities etc)	Political instability and the fragile economic environment of the country has led many investors to flee the country
Public engagement	- Absence of State intervention - Favourable tax system	- Insufficient political vision and insight by the State for attracting foreign maritime management companies - Political instability and uncertainty - Bureaucracy - Corruption

Table 8 - CRUISE TOURISM: results of the benchmark analysis

CRUISE TOURISM[9]	Growth drivers	Barriers to growth
Maritime research	Research on economic, social and environmental impacts.	Limited resources
Development and innovation	Participation of stakeholders to public debate	----
Access to finance	PPP regime	Limited financial resources
Smart infrastructure	Service to passengers	High cost of application
Maritime clusters	Existence of cruise port cluster	Lack of funding for promoting and facilitating the clustering of the actors
Education, needs in training and skills	Adequate number of universities and polytechnic universities	- No specialized cruise programs at higher level of education - No training programs
Maritime spatial planning	Planning in regional level	SMP under development
Integrated local development	Participation to projects and common actions for development of cities	- Environmental pressures - Congested destinations - Awareness from local communities - No quotas exists for regulate the activity
Public engagement	Involvement of local authorities to development	Awareness on the impacts of the activity and its sustainable character

[9] The benchmark instance is “Cruise Tourism in Italy”.

Table 9 - COASTAL TOURISM: results of the benchmark analysis

COASTAL TOURISM[10]	Growth drivers	Barriers to Growth
Maritime research	----	Limited focus on sea dimension
Development and innovation	Environmental & cultural protection policies	----
Access to finance	Public support	Lack of capital access
Smart infrastructure	Suitable energy and telecommunication infrastructure	Weak road and train maritime infrastructure
Maritime clusters	----	----
Education, needs in training and skills	Good quality of tourism education	----
Maritime spatial planning	----	----
Integrated local development	Good urban planning	Public debates mainly on environmental issues
Public engagement	Good marketing from local public authorities.	Bureaucracy

Table 10 - SHORT SEA SHIPPING: results of the benchmark analysis

SHORT-SEA SHIPPING[11]	Growth drivers	Barriers to Growth
Maritime research	High involvement of universities in EU-funded R&D projects	Lack funding due to economic recession
Development and innovation	----	----
Access to finance	----	Difficulties of raising capital for the acquisition of new vessels
Smart infrastructure	Good general infrastructures	Very high cost
Maritime clusters	Significant number of companies offering qualitative services	High cost
Education, needs in training and skills	High level of professional training	Problem of attracting new seafarers
Maritime spatial planning	----	----
Integrated local development	EU cohesion policy	Limited public funding and initiatives
Public engagement	----	----

[10] The benchmark instance is “Coastal Tourism in Sardinia (Italy)”.
[11] The benchmark instance is “Short-Sea Shipping in the Netherlands”.

Table 11 - YACHTING AND MARINAS: results of the benchmark analysis

YACHTING AND MARINAS[12]	Growth drivers	Barriers to Growth
Maritime research	----	No government programs related to maritime research
Development and innovation	----	Bureaucratic procedures
Access to finance	Public support	Difficult access to credit
Smart infrastructure	Public support for the development of a network of marinas	----
Maritime clusters	Existence of shipyard districts	----
Education, needs in training and skills	- Technical institutes - Know how	----
Maritime spatial planning	Marine protected areas	----
Integrated local development	Regional efforts for the promotion of the activity	Lack of transport connections
Public engagement	Effective system of safety of navigation	High tax burdens to yachts owners

[12] The benchmark instance is "Yachting and marinas in Italy".

5.2 SWOT analysis

Table 12 - MARINE AQUACULTURE: results of the SWOT analysis

Marine Aquaculture		
Maritime Research	**Strengths**	**Weaknesses**
	Dedicated research from the Institute of Aquaculture of the Hellenic Centre for Marine Research Significant number of research programs Infrastructures for experiments and pilot applications	Private funding
	Opportunities	**Threats**
	EU co-funded research programs Participation to research projects	Limited funding
Development and innovation	**Strengths**	**Weaknesses**
	Significant number of applied research Involvement of the private sector in pilot projects Certifications	Difficulties to obtain licences Current economic environment Lack of coordinated promotional campaign with export orientation
	Opportunities	**Threats**
	Research on the :diversification of the production, the improvement and modernization of currently applied cultivation methods. New markets for exports	Competition from non EU countries which face lower labour cost conditions Lack of level playing field
Access to finance	**Strengths**	**Weaknesses**
	Large companies are listed in the Athens Stock Exchange Incentives for inventors National agency for investments	Difficulties access to private funding for small operators
	Opportunities	**Threats**
	Possibility of public funding through the EFF	Red tape for financial public support
Smart infrastructure	**Strengths**	**Weaknesses**
	Improved road network Research infrastructures	----
	Opportunities	**Threats**
	Research on the diversification of infrastructures adopted to environmental characteristics	----
Maritime clusters	**Strengths**	**Weaknesses**
	----	No related maritime cluster Lack of cooperation among producers for the development of common promotional activities to new markets
	Opportunities	**Threats**
	Federation of Greek Maricultures Pan-Hellenic Federation of small-medium maricultures	----
Education, training and skills	**Strengths**	**Weaknesses**
	Existence of related university departments and specialized technological institutions, as well as post-graduated programs	Improvement of the basic level of education for the new generation entering the labour market Tendency to associate aquaculture with biological studies Reengineering of educational system resulting to the mergence of existing departments, with no clear positive outcome at this stage
	Opportunities	**Threats**
	EU-funding for the creation of training programs and life-long education programs	Limited funding
Maritime spatial planning/Integrated Coastal Zone Management	**Strengths**	**Weaknesses**
	Law of spatial planning and sustainable development and common Ministerial Degree for spatial planning for aquaculture Areas of Organized Development of Aquaculture Activities	No clear line regarding the integration of aquaculture in maritime spatial planning;
	Opportunities	**Threats**
	Under development	New and under establishment
Integrated local development	**Strengths**	**Weaknesses**
	Regional provisions for the development of new farms and the extension of existed ones	Not included in integrated local development initiatives
	Opportunities	**Threats**
	Maritime Spatial Planning	Environmental concerns Opposition from local communities-alternative land uses
Public engagement	**Strengths**	**Weaknesses**
	Industry recognised as a strategic sector;	Red Tape and large number of co-responsible services

Marine Aquaculture		
	Research	Lack National promotion plan to new markets
	Opportunities	**Threats**
	Fisheries programs and EU funding sources MSP	Opposition from local communities regarding the areas selected for aquaculture development No mechanism for conflict resolution –(lack of culture for social resolution)

Table 13 - DEEP-SEA SHIPPING: results of the SWOT analysis

Deep Sea Shipping		
Maritime Research	**Strengths**	**Weaknesses**
	Experienced Laboratories conduct research in all related maritime areas	Limited state funded
	Opportunities	**Threats**
	Private initiatives and Funds for Maritime Research (especially through Scholarships)	Underdeveloped private institutes or Bodies of Maritime/ Marine education or research Extremely limited and not well organized or systematic private funding for maritime research
Development and innovation	**Strengths**	**Weaknesses**
	Strong links with international classification societies and ship building/ ship repair yards Maritime tradition	Decline of ship repair industry Shortage of Greek ship officers
	Opportunities	**Threats**
	Expanding into new market segments Investments on fuels saving technologies and optimization of fuels efficiency Voluntary application of international regulations (before enforcement)	----
Access to finance	**Strengths**	**Weaknesses**
	Bank loans. Stock exchange markets(NYSE, NASDAQ)	Over exposure to the banking system and its shortcomings
	Opportunities	**Threats**
	New developing and constructive relations with Chinese banks	The ongoing crisis in the banking sector of Greece and Europe and the curtailing of new loans do not allow new players to appear and older ones with small fleets to modernize their vessels.
Smart infrastructure	**Strengths**	**Weaknesses**
	Good general infrastructures (energy, telc etc)	Insufficient rail and road transport No well developed transport infrastructures (port infrastructures and integration with other transport means) Lack of port policy
	Opportunities	**Threats**
	Concessions EU funding New commercial train line	Lack of financial sources to support infrastructural development
Maritime clusters	**Strengths**	**Weaknesses**
	Large number of companies Concentration of the activity in Attica region	Absence of local demand Weak linkage with related and supporting industries Weak support by the State in the support and creation of a national body that would organize the country's maritime clusters
	Opportunities	**Threats**
	----	----
Education, training and skills	**Strengths**	**Weaknesses**
	University departments Public and private post secondary schools Marine Academies State Funded continuous education and accreditation centers	Limited financial resources
	Opportunities	**Threats**
	Private funding	Outdated training system for seafarers (infrastructures, equipment and recognition of qualifications)
Maritime spatial planning/Integrated Coastal Zone Management	**Strengths**	**Weaknesses**
	----	----
	Opportunities	**Threats**
	Under development	----
Integrated local development	**Strengths**	**Weaknesses**
	Ship-owners have also mainly supported through their financial involvement the following sectors: Banking, Airline Industry, Coastal Shipping	Political instability and the fragile economic environment of the country has led many investors to flee the country
	Opportunities	**Threats**
	New infrastructure is expected to enhance local development	----
Public engagement	**Strengths**	**Weaknesses**
	Absence of State Intervention	Insufficient political vision and insight by the State for

Deep Sea Shipping		
	Favourable tax regime	attracting foreign maritime management companies Bureaucracy
	Opportunities	**Threats**
	Port development priorities	Political instability and uncertainty

Table 14 - CRUISE TOURISM: results of the SWOT analysis

Cruise Tourism		
Maritime Research	**Strengths**	**Weaknesses**
	Research is conducted within maritime departments	Lack of adequate data for monitoring the sector
	Opportunities	**Threats**
	Expansion of the sector has increased the interest of local authorities and port organizations which support limited scale research	Limited financial resources
Development and innovation	**Strengths**	**Weaknesses**
	Enhancement of local economy	Lack of adequate resources for promoting the sector
	Opportunities	**Threats**
	Promotion of local production	No clear vision regarding the development of regional sectors Limited resources for promoting the activity in regional level
Access to finance	**Strengths**	**Weaknesses**
	EU funding for the construction of relevant water projects	Limited financial opportunities in regional level to invest on the improvement and extension of infrastructures and superstructures
	Opportunities	**Threats**
	PPP alternatives	----
Smart infrastructure	**Strengths**	**Weaknesses**
	Extensive port network Smart service applications for cruise passengers	Limited scale of interventions Limited dedicated infrastructures
	Opportunities	**Threats**
	Improvements and extensions of infrastructures in major national ports	Limited funding High cost
Maritime clusters	**Strengths**	**Weaknesses**
	----	Coordination gap among major players for developing common activities Lack of an institutional body for organizing the clustering of sectoral actors
	Opportunities	**Threats**
	There is the cluster of cruise ports operating within the Hellenic ports Association There are relevant cruise associations aiming –among other objectives to network with the major stakeholders	Lack of funding for promoting and facilitating the clustering of the actors
Education, training and skills	**Strengths**	**Weaknesses**
	Within maritime and tourism departments Summer schools and seminars	No specialized cruise programs
	Opportunities	**Threats**
	Current touristic educational structure	Lack of vocational schools for training seafarers based on the demands of contemporary cruise
Maritime spatial planning/Integrated Coastal Zone Management	**Strengths**	**Weaknesses**
	----	Under development
	Opportunities	**Threats**
	Under development	----
Integrated local development	**Strengths**	**Weaknesses**
	Cooperation of port authorities and municipalities for the development of common projects for enhancing development and increase the synergies between cruise sector and local activities	Lack of coordination of actions between policy planning authorities and the stakeholders of the market
	Opportunities	**Threats**
	EU projects for transfer know-how and experience	Congested destinations-No quotas exists for regulating the activity Environmental pressures
Public engagement	**Strengths**	**Weaknesses**
	Favouring tax regime	Lack of specific strategic planning Limited national promotion No specific incentives for attracting cruise ships to the Greek flag Red Tape *Not integrated actions for connecting different cruise players (airports, ports, museums etc)*
	Opportunities	**Threats**
	Recent legislative reform	Environmental awareness Opposition of specific groups to legislative reform

Table 15 - COASTAL TOURISM: results of the SWOT analysis

Coastal Tourism		
Maritime Research	**Strengths**	**Weaknesses**
	Laboratories conduct research on related to coastal tourism research	Limited financial resources for extended research
	Opportunities	**Threats**
	EU-co projects	----
Development and innovation	**Strengths**	**Weaknesses**
	Development of new touristic products on the basis of cultural and natural experiences Promotion of island identity Developed coastal shipping network Eco-label	Lack of resources for supporting regional programs for innovation Scattered measures
	Opportunities	**Threats**
	e-Tourism Development of infrastructures	Seasonality Poorly connection during off season Economic state of passenger shipping
Access to finance	**Strengths**	**Weaknesses**
	Investment Incentives Law Development Law	Limited capital resources for SME's Limited credibility due to recession Limited national resources
	Opportunities	**Threats**
	EU funding-structural funds	Difficulty in access and bureaucracy can lead to the degradation of the touristic product
Smart infrastructure	**Strengths**	**Weaknesses**
	Extensive port network Extensive accommodation infrastructures Suitable energy and telecommunication infrastructures	Weak road system in specific areas Degraded marina network
	Opportunities	**Threats**
	Investment Law EU-programs Current applied projects regarding the improvement of infrastructures	Lack of funding
Maritime clusters	**Strengths**	**Weaknesses**
	----	Lack of cooperation among tourism companies for the promotion of common interests
	Opportunities	**Threats**
	Cooperation among tourism associations with the corresponding of shipping in issues of common interest	----
Education, training and skills	**Strengths**	**Weaknesses**
	Schools of Tourism Education Vocational Schools Institutes of vocational Training Schools of Tour Guides Master degree programs Private schools	No relevant department at university level
	Opportunities	**Threats**
	Training programs within operational programs for both employees and unemployed	----
Maritime spatial planning/Integrated Coastal Zone Management	**Strengths**	**Weaknesses**
	Commission for the approval of land use and terms of building for touristic ports	Under development
	Opportunities	**Threats**
	Under development	Conflict with other current activities such as aquaculture
Integrated local development	**Strengths**	**Weaknesses**
	Local authorities design and implement programs for the development of the regional sector	Limited funding in regional level Lack of specialized personnel
	Opportunities	**Threats**
	Promotion of local production and differentiation of touristic supply	Lack of MSP
Public engagement	**Strengths**	**Weaknesses**
	Legislation and incentives for the support of the sector	Interventions mostly related to infrastructures Polices mostly related to coastal areas and not maritime tourism development Scattered actions
	Opportunities	**Threats**

Coastal Tourism		
	Green Tourism Act Alternative Tourism Act EU-funding Investment Law	Red Tape

Table 16 - SHORT SEA SHIPPING: results of the SWOT analysis

Short Sea Shipping		
Maritime Research	**Strengths**	**Weaknesses**
	Laboratories conduct relevant research	Limited national funding Limited private interest
	Opportunities	**Threats**
	EU-co projects	----
Development and innovation	**Strengths**	**Weaknesses**
	Extensive port network due to insularity New infrastructures under construction	Legislative barriers related to human resources obligations Limited interest from the sector to participate more dynamic to EU projects
	Opportunities	**Threats**
	EU projects such as TEN-T, Motorways of the Seas etc Concessions opportunities	Aged fleet
Access to finance	**Strengths**	**Weaknesses**
	Self finance of the sector International relations	Difficulties of raising capitals due to economic recession
	Opportunities	**Threats**
	EU funding	No incentives from state's side for the renewal of the fleet
Smart infrastructure	**Strengths**	**Weaknesses**
	Extensive road and port network	No dedicated freight terminals
	Opportunities	**Threats**
	Infrastructures under construction	----
Maritime clusters	**Strengths**	**Weaknesses**
	Links with other maritime actors	High cost to establish maritime cluster and absence of a public body to undertake this effort
	Opportunities	**Threats**
	Promotion centre of SSS	----
Education, training and skills	**Strengths**	**Weaknesses**
	University departments Public and private post secondary schools Marine Academies State Funded continuous education and accreditation centres	Limited financial resources
	Opportunities	**Threats**
	Interest for public funding	Outdated training system for seafarers (infrastructures, equipment and recognition of qualifications)
Maritime spatial planning/Integrated Coastal Zone Management	**Strengths**	**Weaknesses**
	----	----
	Opportunities	**Threats**
	Under development	----
Integrated local development	**Strengths**	**Weaknesses**
	Adequate equipment Good accessibility to road network	Limited superstructure in peripheral ports Limited railway connections Lack of intra-port competition Low quality of port services
	Opportunities	**Threats**
	Development of new commercial train line	Lack of cohesion
Public engagement	**Strengths**	**Weaknesses**
	Absence of State Intervention Favourable tax regime Legislative regime for attracting establishment	Poor initiatives for promoting SSS Flagging out of the national registry Excessive manning requirements
	Opportunities	**Threats**
	EU relevant projects EU legislation (Blue Belt)	Lack of motives for fleet renewal (decrease of the average age of the ships, increase of safety and environmental performance and the provision of qualitative services)

Table 17 - YACHTING AND MARINAS: results of the SWOT analysis

Yachting and Marinas		
Maritime Research	**Strengths**	**Weaknesses**
	Institutions conduct research in engineering and ship design	Limited research
	Opportunities	**Threats**
	----	Limited funding
Development and innovation	**Strengths**	**Weaknesses**
	Large number of professional leisure boats Companies offering all kind of yachting and supportive services Offer of specialized services Established international yacht show	A number of marinas requires infrastructural improvements Existence of marinas with basic port infrastructures only Insufficient management Lack of national promotional plan
	Opportunities	**Threats**
	Investment Law Privatization program	Strong competition from neighbour countries
Access to finance	**Strengths**	**Weaknesses**
	PPP regime	Due to economic recession yachting companies are over exposed to banking system Limited public funds
	Opportunities	**Threats**
	EU funding	----
Smart infrastructure	**Strengths**	**Weaknesses**
	Twenty marinas in operation Airports and upgraded road system Shipyards infrastructures	Currently limited number of marinas compared to the length of the coastline and the number of islands Marina and tourist port infrastructures are degraded Limited number of berth places
	Opportunities	**Threats**
	Privatisation program EU funding New marina projects in process	Increased growth rates from competitive countries
Maritime clusters	**Strengths**	**Weaknesses**
	Existence of yacht and marina associations	Non existence of relevant cluster in the sector, resulting to the lack of coordinating actions for the promotion of the sector to new markets
	Opportunities	**Threats**
	Cooperation with shipping associations	Limited finance and support for the formulation of specialized cluster
Education, training and skills	**Strengths**	**Weaknesses**
	Existence of marine academies Existence of private training centers	Non existence of relevant courses in university departments No interconnection with touristic education
	Opportunities	**Threats**
	EU funding for the creation of relevant training programs especially for ratings	----
Maritime spatial planning/Integrated Coastal Zone Management	**Strengths**	**Weaknesses**
	Existence of legislation for the location of marinas	Under development
	Opportunities	**Threats**
	Under development	----
Integrated local development	**Strengths**	**Weaknesses**
	Existence of local small shipyards Regional authorities participate to development projects	Limited personnel for supporting the development of the sector Limited financial resources
	Opportunities	**Threats**
	EU-funding	Red Tape
Public engagement	**Strengths**	**Weaknesses**
	Investment Law Privatization program	Red Tape Lack of initiatives to support the activity and shipbuilding of leisure boats. Current legislative regime for yachting is not corresponding to market needs -Delays in reforming legislative regime Tax burdens to yacht owners
	Opportunities	**Threats**
	EU funding	Delays in the completion t of the projects

6. Maritime strategies

Table 18 – List of marine-related strategies in Greece

Title of the official document	Level (regional, national, cross-national, EU level)	Responsible body	Maritime Strategy concerned	Kind of Strategy document and publishing date
National Strategic Plan for Fisheries, 2007-2013 http://www.alieia.gr/documents/opfisheries07-13.pdf	National	Ministry of Rural Development and Food	Marine aquaculture Fishing for human consumption	Strategic documents 2007
Strategic Objectives of the Ministry of Shipping and Aegean, 2013	National	Ministry of Shipping and Aegean	Deep sea shipping Short Sea Shipping Passenger ferries services	Minister's decision, 2013
National Strategic Reference Framework, 2007 – 2013 & Annual Tourism Reporting For 2012 http://www.espa.gr/elibrary/NSRF%20document_english.pdf	National	Ministry of Economy and Finance & Ministry of Tourism	Coastal Tourism Cruise tourism	Strategic Framework,2007
National Port Strategy 2013-2018 www.hcg.gr	National	Ministry of Shipping and Aegean	Deep sea shipping Short Sea Shipping Passenger ferries services	Strategy document, December 2013