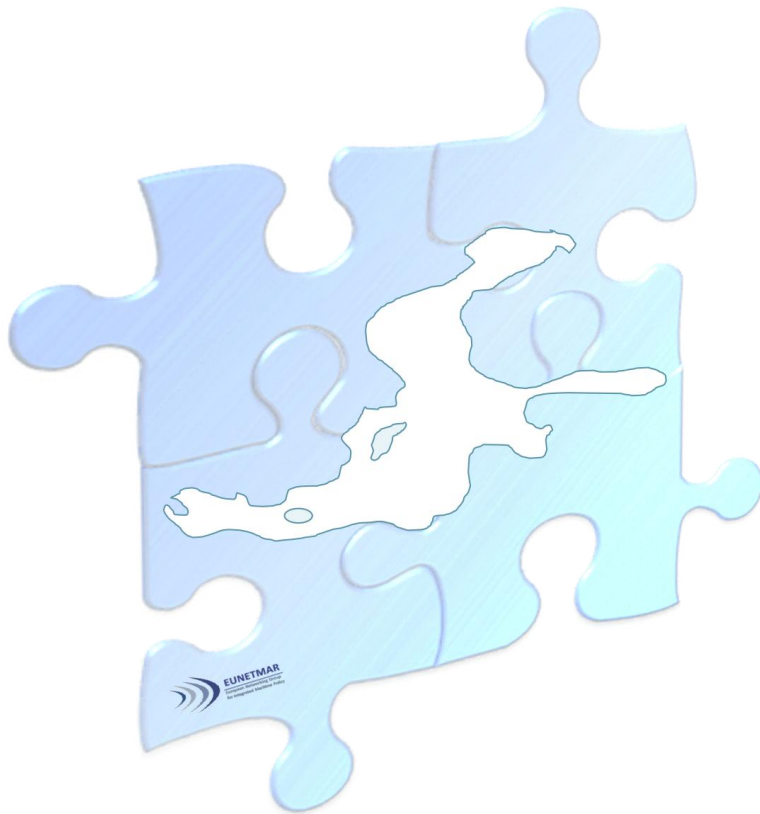




STUDY ON BLUE GROWTH, MARITIME POLICY AND EU STRATEGY FOR THE BALTIC SEA REGION



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Contents

1. General overview.....	2
4. Marine and maritime economic activities (MEAs)	3
5. Breakdown of maritime economic activities at regional level (NUTS 2) and selection of most relevant region(s) for the study	6
6. List of the 7 largest, fastest growing and with most future potential marine and maritime economic activities	9
0.1 Ranking order of the 7 largest marine and maritime economic activities	9
6.1 Ranking order of the 7 fastest growing marine and maritime economic activities over the 3 past years.....	10
6.2 Ranking order of the 7 marine and maritime economic activities with most future potential	10
7. Growth scenarios for the most relevant and promising marine and maritime economic activities.....	11
7.1 Description of the nature of each of the 6 maritime economic activities and value chains.....	12
7.2 Description of economic and infrastructural scenario	13
7.3 Regulatory environment of the maritime economic activities	15
8. Growth drivers and barriers to growth for the 6 most promising marine and maritime economic activities	16
9. List of existing clusters	20
10. Analysis of maritime strategies at regional and national level, as well as those under preparation and their links with Smart Specialisation Strategies	21
References.....	23
1. Selection of the most important regions	2
1. 7 Largest maritime economic activities: indicative size of all activities	2
2. 7 Fastest growing maritime economic activities: relative growth of all activities	3
3. 7 maritime economic activities with most future potential: indicators for all activities	4
4. Maritime strategies.....	5

1. General overview

Morphological structure of the coastline

2. Finland has a coastline length of 19.463 km, which makes it the third largest coastline among the EU-22 coastal Member States and accounts for 14,3% of the total coastline length of the EU-22 coastal regions.
3. The country's single coastal area lies on the Baltic Sea and its coastal zone (within a range of 10 km from the coast) covers 21.299 km², representing 5,1% of the total EU-22 Member States coastal area.

Population and related social conditions for maritime areas

- As of 2012, 3,3 million people – 60,8 % of the country's total population - lived in coastal regions with an average density of only 18 inhabitants per km². This density is the lowest among the EU-22 coastal areas and 6 times lower than the average density in the EU's coastal regions (108 inhabitants per km²).
- In 2012, total employment in the population aged 20-64 years (in coastal NUTS-2 regions, which is the whole country) was about 2,36 million people, representing 1,22% of the employed labour force in all the EU-22 coastal Member States (100% of the Finish labour force).
- In 2012, total unemployment in the population aged 20-64 years (in coastal NUTS-2 regions, which is the whole country) was about 177 thousand people representing 0,8% of the unemployed persons in all the EU-22 coastal Member States (100% of the Finish unemployed persons).

Economic role of maritime areas over the national total

- The Gross Domestic Product (GDP) per capita in Finland's coastal regions was about EUR 37 thousand (2010) or 11,3% higher than the national average GDP per capita, which was about EUR 33,3 thousand.
- The gross value added (GVA) of coastal NUTS-3 regions was about EUR 104.797 million in 2010, which is 67,34% of the national GVA.

GVA – Details by NACE activities (2010)

Sector	GVA of coastal regions (billion EUR)	Share in the national GVA for the sector
Agriculture, Aquaculture and Fishing (A)	1,90	42,4
Manufacturing (C)	17,35	63,9
Construction (F)	6,73	64,4
Wholesale and retail trade; transport; accommodation and food service activities; information and communication (G-J)	25,18	74,0

Employment – Details by NACE activities (2010)

- In 2010, there were 1.320 thousand employees in the four NACE listed below; 825 thousand or 62,5% among them work in coastal NUTS-3 regions.

Sector	Employment of coastal regions (thousand)	Share in the national employment for the sector
Agriculture, Aquaculture and Fishing (A)	57,1	46,9
Manufacturing (C)	221,7	58,0
Construction (F)	115,0	62,0
Wholesale and retail trade; transport; accommodation and food service activities; information and communication (G-J)	431,5	68,4

4. Marine and maritime economic activities (MEAs)

Table 1 - Overview of relevant economic activities in Finland at NUTS-0 level

Maritime economic activity		GVA (EUR, billion)	Employment (*1000)	Number of enterprises	Further indicators	Source & reference year
0. Other sectors						
0.1	Shipbuilding (excl. leisure boats) and ship repair	0,19	5,87	401		Eurostat 2010
0.2	Water projects	0,05	0,54	112		Eurostat 2010
1. Maritime transport						
1.1	Deep-sea shipping	0,03	0,37	118	8% of goods transported by DSS in 2010	Eurostat 2010
1.2	Short-sea shipping (incl. Ro-Ro)	0,41	4,15	118	92% of goods transported by SSS in 2010	Eurostat 2010
1.3	Passenger ferry services	0,43	6,69	122		Eurostat 2010
1.4	Inland waterway transport	0	0,04	6		Eurostat 2010
2. Food, nutrition, health and ecosystem services						
2.1	Fish for human consumption	0,27	5,00	435	3.365 fishermen and 133.000 t caught in 2012	Eurostat 2010 Annual Economic report on the EU Fishing Fleet, 2012, JRC Commercial Marine Fishery 2011, Finnish Game and Fisheries Research Institute (RKTL)
2.2	Fish for animal feeding	0,001	0,03	Included in 2.1		Eurostat 2010 Annual Economic report on the EU Fishing Fleet, 2012, JRC
2.3	Marine aquaculture	0,01	0,279	63		Economic Performance of the EU Aquaculture Sector, 2012, JRC Aquaculture 2011, Finnish Game and Fisheries Research Institute (RKTL)
2.4	Blue biotechnology	0	0	0		
2.5	Agriculture on saline soils	0	0	0		
3. Energy and raw materials						
3.1	Offshore oil and gas	0	0	0		
3.2	Offshore wind	0	0,02	4		Estimate based on data from Finnish association of wind Energy
3.3	Ocean renewable energy	0	0	0		
3.4	Carbon capture and storage	0	0	0		
3.5	Aggregates mining (sand, gravel, etc.)	Limited activity, no data available	Limited activity, no data available	Limited activity, no data available	Limited activity, no data available	
3.6	Marine minerals mining	Limited activity, no data available	Limited activity, no data available	Limited activity, no data available	Limited activity, no data available	
3.7	Securing fresh water supply (desalination)	0	0	0		
4. Leisure, working and living						
4.1	Coastal tourism	0,20	6,41	929		Eurostat 2010
4.2	Yachting and marinas	0,08	2,29	253		Eurostat 2010
4.3	Cruise tourism	0,01	0,23	6		Eurostat 2010
5. Coastal protection						
5.1	Coastal protection	0,007	0,071			Estimate 2010 based on

						national expenditures - Eurostat Estimate 2010 based on national expenditures - Eurostat
5.3	Protection of habitats	0,001	0,008			
6. Maritime monitoring and surveillance						
6.1	Traceability and security of goods supply chains	Data not available	Data not available	Data not available	Data not available	Data not available
6.2	Prevent and protect against illegal movement of people and goods	Data not available	Data not available	Data not available	Data not available	Data not available
6.3	Environmental monitoring	Data not available	Data not available	Data not available	EUR 514 million of public expenditure for environmental protection in 2010	Eurostat 2010

Table 2 - Overview of relevant maritime economic activities in Finland at NUTS-0 level

Maritime economic activity		Overview	Socio economic indicators	Source & reference year
0. Other sectors				
0.1	Shipbuilding (excl. leisure boats) and ship repair	Construction of cruise and passenger ferries. Specific activity on Arctic shipbuilding.		
0.2	Water projects	Water projects concern harbours (fishing, freight marinas) and other projects due to land uplift (4-9 mm/year) for instance.		Finland environmental administration
1. Maritime transport				
1.1	Deep-sea shipping	Shipping is the main trade transport form, 90% of export and 70% of the import goes with ships. Most of the freight is transported through short-sea shipping from/to mainland EU. These MEAs are highly related to the economic growth of the Finnish industry. About 50 harbours are in existence.	Finnish ships have around 9.000 employed people. Maritime transport provides an annual EUR 500 million in wages to employed people. Finnish maritime and offshore companies are globally competing companies.	Meristrategiadirektiivin merenhoidon suunnittelua tukea asiantuntiryhmä (8/2011)
1.2	Short-sea shipping (incl. Ro-Ro)			Myös Suomen vienti ja tuonti tapahtuvat pääasiallisesti meriteitse: vuonna 2010 ulkomaankaupan kuljetusten kokonaismäärästä 82 prosenttia liikkui laivoilla (Tullihallitus 2011a)
1.3	Passenger ferry services	Passenger traffic has been growing steadily.	Half of the international passenger traffic comes with ferries (2010). 21 million ferry passengers annually, 4 million of them are inland waterway passenger transport	Tilastokeskus (2011)
1.4	Inland waterway transport		21 million ferry passengers annually, 4 million of them are inland waterway passenger transport	Tilastokeskus (2011)
2. Food, nutrition, health and ecosystem services				
2.1	Fish for human consumption	Increasing investments in coastal fisheries, but profits have been hard to gain. Among trawlers, the average vessel size is increasing. The rising cost of fuel is impacting significantly the profitability of fishing businesses.	95% of the catch comes from the Baltic. Industry generates a total EUR 585 million annually, 85% comes from processing and market. The sector has 3.365 fishing boats (2010), mainly fishing in coastal waters	JRC; Annual Economic; report on the EU Fishing Fleet
2.2	Fish for animal feeding	Same stakeholders as for Fish for human consumption		
2.3	Marine aquaculture	Fry production accounts for a large share of aquaculture production, notably used by owners of private waters and recreational fishery for	9.846 t of fish for human consumption are cultivated and 232 t of fry. Fry production value is EUR 24,3 million (2011). Fish	Norden - Perspectives for sustainable development of Nordic aquaculture - The Paban-Report

		restocking. In recent years the Finnish aquaculture sector has downsized its production due to the economic recession and competition with imported fish (mainly from Norway)	cages on saltwater account for about 50% of the total Finnish aquaculture income. There is new construction of 9 modern closed circulation aquaculture production sites with a combined production capacity of about 2.000 t exclusively for new high-value species (sturgeon, pikeperch, and whitefish). There is stimulus for an active consolidation process to gather fish farms into fewer, larger and more functional units, operating on good sites.	(2013) ¹ Finnish Game and Fisheries Research Institute (RKTL) 2008-2011
2.4	Blue biotechnology	N/A	N/A	
2.5	Agriculture on saline soils	N/A	N/A	
3. Energy and raw materials				
3.1	Offshore oil and gas	N/A	N/A	
3.2	Offshore wind	There is one offshore farm in Finland at present. There are plans to support another project among 16 under development (support from Ministry of Employment and Economy). There should be 2 offshore farms in 2020 in Finland and this sector may meet a larger growth during 2020-2030.	The present power of offshore wind is 2,3 MW, the potential of the 16 projects is 3.000 MW.	Finnish Wind Power Association
3.3	Ocean renewable energy	N/A	N/A	
3.4	Carbon capture and storage	Project in progress	Project in progress	http://bellona.org/ccs/ccs-news-events/news/article/a-finnish-idea-carbon-capture-and-neutralization.html
3.5	Aggregates mining (sand, gravel, etc.)	Small-scale industry at present. No plan or strategy exists, but the seafloor is under continued research.	Small amounts have been taken from the Baltic Sea (1996-2009 about 6,2 million m ³ , mainly from the sea outside Helsinki, Kotka, Pori and Hailuoto). There are some large plans but they all need environmental permits before getting started.	HELCOM 2010: Towards a tool for quantifying anthropogenic pressures and potential impacts on the Baltic Sea marine environment: A background document on the method, data and testing of the Baltic Sea Pressure and Impact Indices. Balt. Sea Environ. Proc. No. 125., s 20, ICES CM/SSGHIE:10 2010, s239
3.6	Marine minerals mining	N/A	N/A	
3.7	Securing fresh water supply (desalination)	N/A	N/A	
4. Leisure, working and living				
4.1	Coastal tourism	Usually based on recreational and cultural values and directly linked to the status of the environment	Tourism is one of the fastest growing sectors in the Baltic Sea region. It can have positive socio-economic impact, but can also put pressures on the environment	Meristrategiadirektiivin merenhoidon suunnittelua tukeva asiantuntijaryhmä (8/2011)
4.2	Yachting and marinas	This MEA increased highly between 1990 and 2008. Sales decreased since the economic crisis of 2008 but could increase in the future if Finnish producers succeed in highlighting their knowledge	There are about 400 harbours for leisure boats. Yachting is very popular in Finland, 22,5 % of Finnish people spend 14 days per year on this activity.	Navigating new routes to a better boat industry – Executive summary of the research programme 2007-2011 in Finland. Tekes Programme Report 6/2012

¹ <http://www.norden.org/fi/julkaisut/julkaisut/2013-546>

4.3	Cruise tourism	Sector in development with several companies operating in all the Baltic sea		
5. Coastal protection				
5.1 – 5.2	Coastal protection	Public bodies in charge of coastal protection are the Ministry of the Environment (environmental policy and control), the Ministry of Agriculture and forestry, the Ministry of Transport and Communications, the Finnish Environment Institute (SYKE), and the Centres for Economic Development, Transport and the Environment (ELY Centres). SYKE is in charge of providing information and developing methods to promote water protection. Several spatial planning projects were implemented in the archipelago areas along the Finnish coast.		Finland environmental administration Metsähallitus
5.3	Protection of habitats	Metsähallitus runs the Marine Inventory Programme MERLIN, which produces data on species and natural habitat types. This data is used in planning the management and sustainable use of the state-owned sea areas, especially recreational use of marine and coastal areas, and conserving their biodiversity.		Finland environmental administration Metsähallitus Meristrategiadirektiivin merenhoidon suunnittelua tukeva asiantuntijaryhmä (8/2011)
6. Maritime monitoring and surveillance				
6.1	Traceability and security of goods supply chains	The Ministry of Employment and the Economy has the main responsibility for this MEA. Customs is the authority that monitors the controls according to a risk-based sampling plan. The Ministry of Agriculture and Forestry has responsibility for traceability of food, agricultural and forestry products.		Finnish Customs Finnish Food Safety Authority (EVIRA) Ministry of Employment and the Economy
6.2	Prevent and protect against illegal movement of people and goods	The Navy is responsible for monitoring Finnish territorial waters, prevent violations and protecting maritime seaways and traffic. Finnish customs deal with issues relating to illegal movements. Controls from customs in 2011: 42.060 goods controls, 219 warehouse controls, 269 corporate audits. 549.832 counterfeit products were stopped.		Meristrategiadirektiivin merenhoidon suunnittelua tukeva asiantuntijaryhmä (8/2011)
6.3	Environmental monitoring	Environmental monitoring is led by different organisations. The Finnish Inventory Programme for the Underwater Marine Environment (VELMU) collects data on the diversity of underwater marine biotopes and species. The Finnish Meteorological Institute is responsible for the physical monitoring of the HELCOM programme for the Baltic Sea.		The Finnish Environment 12 2009

5. Breakdown of maritime economic activities at regional level (NUTS 2) and selection of most relevant region(s) for the study

According to the methodology used to score the maritime role of the coastal NUTS-2 regions in Finland based on the water transport, coastal tourism, fishing and aquaculture sectors, the southern region of

Eteläsuomi – where the cities of Turku and Kotka-Hamina are located – is the highest ranked and is analysed below (See Annex Finland for all coastal NUTS-2 regions' rankings).

Table 3 - Overview of relevant maritime economic activities in the Etela-Suomi region

Maritime economic activity		GVA (EUR, billion)	Employment (*1000)	Number of enterprises	Further indicators	Source & reference year
0. Other sectors						
0.1	Shipbuilding (excl. leisure boats) and ship repair	0,076	2,348	160		Tilastokeskus 2011
0.2	Water projects	0,006	0	13		Tilastokeskus 2011
1. Maritime transport						
1.1	Deep-sea shipping	0,009	0,11	34		Eurostat 2010
1.2	Short-sea shipping (incl. Ro-Ro)	0,12	1,21	34		Eurostat 2010
1.3	Passenger ferry services	0,09	1,33	24		Eurostat 2010
1.4	Inland waterway transport	0	0,03	5		Tilastokeskus 2011
2. Food, nutrition, health and ecosystem services						
2.1	Fish for human consumption	0,14	2,6	224		Finnish Game and Fisheries Research Institute (RKTL) 2010
2.2	Fish for animal feeding	0	0,02	Included in 2.1		Finnish Game and Fisheries Research Institute (RKTL) 2010
2.3	Marine aquaculture	0,003	0,09	20		Finnish Game and Fisheries Research Institute (RKTL) 2010
2.4	Blue biotechnology	N/A	N/A	N/A		
2.5	Agriculture on saline soils	N/A	N/A	N/A		
3. Energy and raw materials						
3.1	Offshore oil and gas	N/A	N/A	N/A		
3.2	Offshore wind	N/A	N/A	N/A		
3.3	Ocean renewable energy	N/A	N/A	N/A		
3.4	Carbon capture and storage	N/A	N/A	N/A		
3.5	Aggregates mining (sand, gravel, etc.)	N/A	N/A	N/A		
3.6	Marine minerals mining	N/A	N/A	N/A		
3.7	Securing fresh water supply (desalination)	N/A	N/A	N/A		
4. Leisure, working and living						
4.1	Coastal tourism	0,03	1,07	155		Eurostat 2010
4.2	Yachting and marinas	0,032	0,916	101		Estimate based on Finnboat data
4.3	Cruise tourism	0,002	0,039	1,02		Tilastokeskus, 2012
5. Coastal protection						
5.1	Coastal protection	Data not available	Data not available	Data not available		
5.3	Protection of habitats	Data not available	Data not available	Data not available		
6. Maritime monitoring and surveillance						
6.1	Traceability and security of goods supply chains	Data not available	Data not available	Data not available		
6.2	Prevent and protect against illegal movement of people and goods	Data not available	Data not available	Data not available		
6.3	Environmental monitoring	Data not available	Data not available	Data not available		

Table 4 - Overview of relevant maritime economic activities in the Etela-Suomi region

Maritime economic activity		Overview	Socio economic indicators	Source & reference year
0. Other sectors				
0.1	Shipbuilding	The yards are situated in the towns of	The turnover in the	http://www.varsinais-

	(excl. leisure boats) and ship repair	Turku / Naatali / Uusikaupunki. Approximately 40% of the marine industry jobs and business offices are located in the Southwest, i.e. Etelä Suomi. The Turku shipyard has specialised in cruise vessels. The Rauma shipyard is specialised in ferries, but also moving strongly into offshore. Turku Repair Yard carries out different types of repair work, refurbishing, conversions.	sector has decreased by 30% since 2008.	suomi.fi/ajankohtaista/uutiset/579-telakkatyoeryhmaen-esitykset-kehysriheen Maritime cluster analysis on the Central Baltic region. SmartComp Research Report No 1, December 2012
0.2	Water projects	This includes construction of dams and embankments, excavation of riverbeds, works on beaches and waterways dredging.		
1. Maritime transport				
1.1	Deep-sea shipping			
1.2	Short-sea shipping (incl. Ro-Ro)	Kotka, Naatali, Hamina and Turku are harbours in located Eteläsuomi, each of them is ranked among the 10 biggest harbours in Finland.	During the beginning of 2012 the cargo flows decreased. So far, the Hamina-Kotka Cluster has suffered the most – for instance, in the Port of Hamina the amount of handled cargo decreased by 25% during the first half of 2012. Regarding foreign shipping traffic, the largest port in 2011 was the Hamina-Kotka port (13,1 million tonnes of total cargo)	Maritime cluster analysis on the Central Baltic region SmartComp Research Report No 1, December 2012
1.3	Passenger ferry services	Turku is the main harbour for passenger traffic, main route is Turku-Stockholm		
1.4	Inland waterway transport		0,30 million tons transported	Finnish Transport Agency
2. Food, nutrition, health and ecosystem services				
2.1	Fish for human consumption	The majority of sea caught fish is from Eteläsuomi, the archipelago in Southwest is the most important fishing area in Finland. In 2010, there were 1.256 fishing vessels in Eteläsuomi. There are problems in conflicts with seal populations and seal-safe fishing gear is being developed.	The fishermen have a high average age. There is a problem attracting young people to the industry.	Finnish Game and Fisheries Research Institute (RKTL)
2.2	Fish for animal feeding	Catching of herring with trawls. A large share of catches is used for fishmeal and fish oil.		
2.3	Marine aquaculture	The main area of production is the Southwest archipelago. Some production is also found in the Kotka region. Sea cage farms are mainly for production of fish for human consumption. Rainbow and white fish are the two main species.		Aquaculture 2011, Finnish Game and Fisheries Research Institute (RKTL) Perspectives for sustainable development of Nordic aquaculture The Paban-Report TemaNord 2013:546
2.4	Blue biotechnology	N/A	N/A	N/A
2.5	Agriculture on saline soils	N/A	N/A	N/A
3. Energy and raw materials				
3.1	Offshore oil and gas	N/A	N/A	N/A
3.2	Offshore wind	N/A	N/A	N/A
3.3	Ocean renewable energy	N/A	N/A	N/A
3.4	Carbon capture and storage	N/A	N/A	N/A
3.5	Aggregates mining (sand, gravel, etc.)	N/A	N/A	N/A
3.6	Marine minerals	N/A	N/A	N/A

	mining			
3.7	Securing fresh water supply (desalination)	N/A	N/A	N/A
4. Leisure, working and living				
4.1	Coastal tourism	Well-developed tourism strategy and logistics in coastal areas		
4.2	Yachting and marinas	Well-developed marinas with good service standard. The Aboland archipelago is the largest archipelago in the Baltic (South of Turku). It has a very extensive network with harbours or other facilities every 10-20 nautical miles. Guest harbours are more infrequent in the Gulf of Finland	75 guest harbours in the southwestern part of Finland and around 10 in inner part of the Gulf of Finland.	Noonsite ² Veneilyn määrä ja taloudelliset vaikutukset Suomessa - Merenkululaitoksen julkaisu 5/2005 ³
4.3	Cruise tourism	Turku is the main port in the region for cruising vessels.	2.000 passengers in 2010; 5.456 in 2011 and 3.500 in 2012. The higher number in 2011 is explained by the fact that Turku was European Capital of Culture	www.cruisebaltic.com
5. Coastal protection				
5.1 – 5.2	Coastal protection	Centres for economic development, transport and the environment implement environmental protection measures and ensure that environmental legislation is observed in their respective areas. The Regional State Administrative Agencies deal permits issued under the Water Act, environmental permits for waste processing facilities and restoration permits for contaminated sites. The Archipelago National Park is located in Southwest Finland.		Metsähallitus Finland environmental administration
5.3	Protection of habitats			
6. Maritime monitoring and surveillance				
6.1	Traceability and security of goods supply chains	Organisations in charge of traceability: Ministry of Employment and the Economy and Customs		
6.2	Prevent and protect against illegal movement of people and goods	The Navy and Customs are in charge of prevention of illegal movement of people and goods		
6.3	Environmental monitoring	Municipalities promote and supervise environmental protection on a local scale. They also issue any environmental permits needed by smaller plants and facilities.		

6. List of the 7 largest, fastest growing and with most future potential marine and maritime economic activities

0.1 Ranking order of the 7 largest marine and maritime economic activities

The seven largest MEAs, listed in Table 5, were chosen based on a score calculated on the basis of the GVA and the number of persons employed by the sector, using 2010 data (For all MEA scores see Annex Finland). There are 13 maritime economic activities present in Finland; there are more than 2 thousand employees each in six of the seven largest activities. Passenger ferry services and short-sea shipping are by far the largest MEAs (in terms of GVA). Short-sea shipping accounts for 93% of maritime freight in Finland.

² <http://www.noonsite.com/Countries/Finland>

³ http://www2.liikennevirasto.fi/julkaisut/pdf5/mkl_2005-5_veneilyn_maara.pdf

Table 5 - Ranking order of the 7 largest maritime economic activities in Finland at NUTS-0 level

Rank	Maritime economic activity	GVA (billion EUR)	Employment (*1000)	Score
1	Passenger ferry services	0,425	6,698	5,47
2	Coastal tourism	0,199	6,412	4,20
3	Short-sea shipping (incl. Ro-Ro)	0,407	4,150	4,11
4	Shipbuilding (excl. leisure boats) and ship repair	0,194	5,874	3,91
5	Fish for human consumption	0,268	4,996	3,84
6	Yachting and marinas	0,078	2,288	1,53
7	Water projects	0,046	0,541	0,50

6.1 Ranking order of the 7 fastest growing marine and maritime economic activities over the 3 past years

The seven fastest growing MEAs, listed in Table 6, were chosen on the basis of scores calculated using the compound annual growth rate for GVA and number of persons employed over the period 2008-2010 (For all MEA scores see Annex Finland). Only 3 maritime economic activities grew in terms of GVA and employment: Fish for human consumption, Fish for animal feeding and Offshore wind. The latter two MEAs have limited economical importance compared to other Finnish MEAs. According to estimates (EUROSTAT), the GVA grew for cruise tourism but employment decreased, as was the case for passenger ferry services. The opposite trend was observed for deep-sea shipping.

Table 6 - Ranking order of the 7 fastest growing maritime economic activities in Finland at NUTS-0 level

Rank	Maritime economic activity	GVA (CAGR)	Employment (CAGR)	Score
1	Fish for human consumption	12,36	1,84	7,10
2	Fish for animal feeding	8,67	2,54	5,61
3	Offshore wind	3,03	0,00	1,52
4	Protection of habitats	4,72	-5,72	-0,50
5	Passenger ferry services	1,83	-2,86	-0,52
6	Deep-sea shipping	-11,08	9,23	-0,93
7	Cruise tourism	0,96	-2,97	-1,01

6.2 Ranking order of the 7 marine and maritime economic activities with most future potential

The seven MEAs with most future potential, listed in Table 7, are based on scores assigned to each MEA by expert views for the six following indicators: innovativeness, competitiveness, employment, policy relevance, spill-over effects and sustainability. (For all MEA scores see Annex Finland). Most of these maritime economic activities are key sectors in Finland in terms of GVA and employment, even if they face difficulties. The selection of other MEAs than the ones chosen could also be relevant, such as Marine aquaculture (limited score) or deep-sea shipping (short-sea shipping more promising in Finland).

Table 7 - Ranking order of the 7 maritime activities with most future potential in Finland at NUTS-0 level

Rank	Maritime economic activity	Score
1-2	Passenger ferry services	++++
1-2	Coastal tourism	++++
3-5	Short-sea shipping (incl. Ro-Ro)	++
3-5	Shipbuilding (excl. leisure boats) and ship repair	++
3-5	Offshore wind	++

6-7	Yachting and marinas	+
6-7	Water projects	+

Sustainability of the selected MEAs:

- Passenger ferry services and short-sea shipping (incl. Ro-Ro): sea transport remains environmentally friendly compared to other transport networks, especially air transport. Projects are in progress to lower the impact on the environment (e.g. LNG-related).
- Coastal tourism: natural landscapes and environment play an important role in the attractiveness of Finnish coastal tourism. Furthermore, from a social point of view, it fosters the development of activities in areas outside of the main cities.
- Shipbuilding (excl. leisure boats) and ship repair: this MEA has been assessed to have both positive and negative impacts on sustainability. On the positive side, it has a positive environmental impact with the development of ships with lower energy consumption.
- Offshore wind: offshore wind is renewable energy and is highly sustainable. However, it has limited social impact due to its limited present importance in Finland.
- Yachting and marinas: the yachting industry in Finland is composed of many SMEs, which must be innovative (design, niche markets, low energy consumption, etc.) to compete internationally.
- Water projects: the sustainability of this MEA is tied to how well the legislation is respect as well as to the implementation of space management tools by Regional Councils.

7. Growth scenarios for the most relevant and promising marine and maritime economic activities

Table 8 - Sets of top-7 maritime economic activities ranking in order of size/growth/scores

Top-7 current size	Top-7 recent growth	Top-7 most future potential
Passenger ferry services	Fish for human consumption	Passenger ferry services
Coastal tourism	Fish for animal feeding	Coastal tourism
Short-sea shipping (incl. Ro-Ro)	Offshore wind	Short-sea shipping (incl. Ro-Ro)
Shipbuilding (excl. leisure boats) and ship repair	Protection of habitats	Shipbuilding (excl. leisure boats) and ship repair
Fish for human consumption	Passenger ferry services	Offshore wind
Yachting and marinas	Deep-sea shipping	Yachting and marinas
Water projects	Cruise tourism	Water projects

Table 9 - 5 most relevant and promising marine and maritime economic activities⁴

5 most relevant and promising maritime economic activities
Passenger ferry services
Coastal tourism
Short-sea shipping (incl. Ro-Ro)
Shipbuilding (excl. leisure boats) and ship repair
Yachting and marinas

Five most promising marine and maritime economic activities were selected as most relevant and promising, given the following rationale:

- Passenger ferry services: this MEA has great importance in the Baltic area, it is ranked first in size and is among the top two MEAs with most future potential.

⁴ Only 5 MEAs are selected as most relevant and promising.

- Coastal tourism: this sector is of great importance but is declining. This sector has strong spill-over effects on other MEAs such as Passenger ferry services and Cruise tourism. Growth can be strengthened by cooperation, most notably in the framework of the “Baltic Brand”.
- Short-sea shipping (incl. Ro-Ro): this MEA has great importance despite a decline between 2008 and 2010. This activity is highly related to the economic growth of the Finnish industry, as most imports and exports are transported via short-sea shipping.
- Shipbuilding (excl. leisure boats) and ship repair: this MEA faces important challenges but there is high knowledge in Arctic shipbuilding and maintenance.
- Yachting and marinas: this MEA has seen some decline in the last five years (since the economic crisis) after decades of growth. There is extensive knowledge in Finland that can be the basis for growth in the future.

Other potentially promising maritime economic activities:

- Water projects: this MEA could have been selected among the six most promising and relevant. Employment is decreasing but this sector faces new opportunities such as development of LNG terminals (to be in line with the emerging energy needs for ferries and cargos) and development of new services to increase attractiveness of Finnish ports for cargos from or to Russia.
- Cruise tourism: the economic importance of this MEA is still limited but there are perspectives of growth, notably on the basis of cooperation between Member States in the framework of the “Baltic Brand”.
- Offshore wind: there are perspectives for growth in Finland but for 2020-2030.

7.1 Description of the nature of each of the 6 maritime economic activities and value chains

Passenger ferry services

There were 21 million ferry passengers in 2010, 17 million coming from abroad and the rest were coastal ferries passengers (Finnish Transport Agency). Over half of the international travellers to Finland come by sea. The main seaports for passenger ferry services in Finland are Helsinki (62% of foreign passengers), Turku (16%) and Maarianhamina (16%), with connections to Sweden (52% of passengers) and Estonia (41% of passengers) (Finnish Transport Agency).

Coastal tourism

Tourism in Finland covers coastal tourism (Helsinki, Turku archipelago) but also inland tourism with winter sports. Coastal tourism is based on city visits, water environment, fishing and walking on ice in the winter. Coastal tourism is highly related to other MEAs such as ferry passenger services and cruise tourism because port cities such as Helsinki and Turku have great touristic value. In addition to the urban areas, tourism has also been developed in the Ahvenanmaan archipelagos. In 2007, the total consumption of tourists in Finland was 14,96 billion euros (Statistics Finland).

In 2012 there were 7,6 million visitors in Finland, 55% of them came for leisure trips. Russians accounted for 47% of foreign visitors, Estonians 10%, Swedish 9%, and German and British 4% each (Statistics Finland).

Short-sea shipping (incl. Ro-Ro)

Short-sea shipping accounts for 90% of the Finnish exports and to 70% of the imports. Road and rail transports compete to a small extent with short-sea shipping, as main traffic comes and goes from the EU (Germany) and land transport leads to long distance through Russia or Norway and Sweden. The development of short-sea shipping is highly related to the development of inland Finnish industries.

Shipbuilding (excl. leisure boats) and ship repair

Finland was responsible for 12% of the global supply of cruise ships (measured by 2008-2011 orders). The export value of the shipyard industry in 2007 was EUR 1,7 billion (Tero Vuorinen Ja Tero Kurki –

Toimialatutkimus Suomen Venealasta). Finnish shipbuilding industry met a large restructuring over the last 20 years. The main shipbuilding company in Finland is now STX, located in Turku, Helsinki and Rauma. STX forms a joint venture, Arctech Helsinki Shipyard, with United Shipbuilding Corporation (Russia).

Yachting and marinas

The Finnish association for leisure boat construction (Finnboat) gathers 272 companies involved in this sector. Most of the activity is export oriented, it accounts for 80% of the sales. The main foreign markets for Finland are Norway, Sweden, British Virgin Island, Russia and Switzerland. The turnover of the 12 biggest enterprises of leisure boat industry in Finland was EUR 300 million in 2008, this accounted for 90% of the sector's turnover (2008).

There are about 400 marinas along the coast. Yachting is a very popular activity in Finland. However, the national market only accounts for 20% of the sales of the Finnish leisure boats and non-national markets (EU and non-EU) account for 80% of the sales even if this market only accounts for 20% of the national industry of leisure boats construction. Imports are increasing, notably from countries such as Poland.

7.2 Description of economic and infrastructural scenario

Passenger ferry services

Turnover of coastal and maritime passenger transport grew by 8% between 2007 and 2011. Sea passenger transport (international transport) accounts for 95% of the turnover of passenger transport. The turnover of the sector grew by 4% between 2007 and 2011 (see Table 10). Turnover in coastal transport (between different ports of Finland, including connections with islands) had a more significant growth over the period: + 276%, but this sub-sector only accounts for 5% of the total turnover maritime passenger transport. This growth is confirmed by the evolution of the number of passengers: + 7% between 2008 and 2010 (Eurostat).

Table 10 - Turnover of coastal and maritime passenger transport in Finland between 2007 and 2011 (EUR million) (Source: Statistics Finland)

	2007	2008	2009	2010	2011	Evolution 2007-2011
Sea passenger transport	1.113	1.125	1.000	1.090	1.156	+4%
Coastal passenger transport	17	17	17	61	64	+276%
Total	1.131	1.141	1.018	1.151	1.220	+8%

The main companies operating in Finland are:

- Finnlines (part of Grimaldi Group – IT)
- Viking Line (FI)
- Tallinn Grupp (EE)

The environmental sustainability of this MEA shall increase in the future with clean shipping projects in the framework of EUSBSR (ship emissions, alternative fuels) and the development of a LNG terminal. A ship from the Viking Line already runs with LNG on the Turku-Stockholm connection.

Coastal tourism

The total consumption expenditure of tourism was EUR 14,96 billion in 2012 (+37% between 2007 and 2012). Foreign tourists accounted for 29% of the total expenditure (Ministry of Employment and Economy). The number of visitors increased by 26% between 2008 and 2012. The largest increases were visitors from Russia and United States (+53% in both cases).

The number of nights spent in Finland grew by 16% between 2005 and 2012. The increase has been especially high in Helsinki region (+29%), between 12% and 13% in all other regions except in Åland, where it decreased by 6%.

Table 11 - Foreign passengers visiting Finland between 2008 and 2012 (1.000 persons) (Source: Statistics Finland)

	2008	2009	2010	2011	2012	% total	Evolution 2008-2012
Number of visitors	6.072	5.695	6.182	7.260	7.636	100%	26%

The objectives of the Finnish Strategy for Tourism by 2020 (developed in 2010) are as follows:

- Share of GDP, at 3,8% in 2007, will increase to 5,1%
- Government tax revenues, at EUR 4 billion in 2008, will increase to EUR 7,5 billion
- The number of jobs in tourism industries will grow from 130.500 in 2007 to 171.000.
- Tourism receipts, at EUR 11 billion in 2007, will increase to EUR 20,7 billion
- The number of international arrivals staying at least one overnight in Finland, will grow from 3,4 million in 2009 to 5,1 million.

One measure of the Tourism Strategy of Finland to 2020 focuses on sustainability: “1.3 Attention to sustainable development in tourism business processes and the supply of services “. This measure covers:

- Attention to sustainable development in society and companies: land-use planning, traffic solutions, route networks, energy, water and waste management.
- Solutions supporting sustainable choices of future consumers: accommodation solutions, transport, food and drinks, programme services and activities, immaterial experience contents.

Short-sea shipping (incl. Ro-Ro)

The total volume transported by sea (import/export) decreased by 5% between 2007 and 2011. This is due to the decline of inland industries. Ro-Ro cargo ships accounted for nearly half (46%) of the gross tonnage of freight ships and it decreased by 7% between 2008 and 2011.

There are 50 harbours in Finland. Kilpilahti, Helsinki, Kotka and Naatali account for half of the transport share.

The growth scenario of short-sea shipping is tightly linked to two factors: the evolution of the Finnish industry and the evolution of Finnish consumption.

The environmental sustainability assessment of short-sea shipping is identical to the passenger ferry services one and is related to clean shipping projects.

Table 12 - Gross tonnage of Finnish merchant fleet (Source: Finnish Transport Agency)

	2008	2009	2010	2011	Evolution 2008-2011
Ro-Ro cargo ships	477.572	445.338	445.402	445.876	-7%
Tankers	363.870	363.870	363.870	363.870	0%
Bulk carriers	70.431	35.912	5.342	20.183	-71%
Other cargo ships	120.422	124 965	155.918	144.140	20%
Total	1.032.295	970.085	970.532	974.069	-6%

Shipbuilding (excl. leisure boats) and ship repair

Finnish shipyards are specialised in technically demanding vessels: luxury cruise liners and car/passenger vessels. In addition, Finland has developed specific skills for arctic equipment.

This industry is a large employer in Finland (5.874 employees in 2010) but faces several difficulties due to international competition (-23% of GVA CAGR between 2008-2010). Furthermore, the STX Corporation (South Korea) faces difficulties and indicated in April 2013 a possible sale of STX Finland.

Finnish Marine Industries coordinates the Strategic Research Agenda, which aims to identify the main themes and areas of research that the industry will need in the future. The Agenda aims to provide a comprehensive overview of the situation and to understand the skills and competence needs involved.

STX shipyards in Finland are certified according to the ISO 14 001 standard. This guarantees an advanced environmental management in the facilities.

Yachting and marinas

This MEA had high growth between 1990 and 2008, but there was a hard decrease in 2009 due to the financial crisis (-40%). The sector is recovering slowly and 2012 sales are at the 2005 levels.

There are large connections between the leisure ship industry and universities. During the 2008-2012 period, a EUR 20 million project was implemented with seven universities and 50 companies to define a strategy over the period until 2025.

The prospects depend on several factors:

- Demand in foreign countries (80% of the market), driven by marina development in yachting areas and the economic situation.
- The need to develop specific skills and niche markets due to hard competition with other countries, notably Poland.

Leisure boat construction is composed of a range of SMEs spread on the Finnish territory. Their impacts on the environment are considered to be limited.

7.3 Regulatory environment of the maritime economic activities

Finland applies EU directives and regulations in the maritime sector. At the national level several regulations deal with maritime transport (maritime safety and security and protection of the environment). As defined in Finnish legislation, the Finnish Transport Safety Agency is a central government agency operating under the Ministry of Transport and Communications. It is responsible for transport system regulation and supervision, promoting transport safety and sustainable development of the transport system and providing administrative services in the transport sector.

The following regulations are related to maritime economy:

- Water Act (N°264, 1961)
- Act on the Technical Safety and Safe Operation of Ships (1686/2009)
- Act on Ships' Crews and the Safety Management of Ships (1687/2009)
- Government Decree on the Manning of Ships and Certification of Seafarers (1797/2009)
- Act on Registering of Ship's Crew (1360/2006)
- Act on the Working and Living Environment and Catering for Seafarers on Board Ships (395/2012)
- Government Decree on Catering for Seafarers on Board Ships (820/2012)
- Ship Safety Control Act (370/1995)
- Government Decree on Inspecting Foreign Ships in Finland (1241/2010)
- Pilotage Act (940/2003)
- Government Decree on Pilotage (246/2011)
- Register of Ships Act (512/1993)
- Register of Ships Decree (874/1993)
- Act on Environmental Protection in Maritime Transport (1672/2009)
- Act on Oil Pollution Response (1673/2009)

- Act on Security Measures on certain Ships and in Ports serving them and on monitoring the Security Measures (485/2004)
- Vessel Traffic Service Act (623/2005)
- Government Decree on Vessel Traffic Service (763/2005)
- Act on the Ice Classes of Ships and Icebreaker Assistance (1121/2005)
- Act on Fairway Dues (1122/2005)
- Act on Enhancing the Competitiveness of Ships engaged in Sea Transport (1277/2007)

8. Growth drivers and barriers to growth for the 6 most promising marine and maritime economic activities

Table 13 - Strengths and weaknesses analysis of most promising maritime economic activities

Passenger ferry services

(Benchmark instance: Greece)

	Drivers for Growth		Barriers for Growth	
	from SWOT analysis	from Benchmark analysis	from SWOT analysis	from Benchmark analysis
Maritime research	Specific research focused on maritime sector	Extensive involvement and experience in maritime research; many Universities and relevant institutions involved in maritime research	Limited funding due to the economic crisis	Reduced funding due to the economic crisis
Development and innovation	Innovation with LNG terminal. Development of ferry passenger services linked to several market segments: tourism, business (seminars).	As in the benchmark case of Greece, innovation is promoted through university research in Finland, as well as by R&D by private companies.	High competition and large investments limits the arrival of newcomers	Limited funding
Access to finance		Financial public support for specific "public services"	Difficult access to finance	Difficult access to finance
Smart infrastructure	Good network of facilities with connections to roads. Main seaports located in the areas with most concentration of population: Southwest and South. Investments are planned in the main passenger seaports, such as Helsinki.	As in the benchmark case of Greece, there are good general infrastructures in Finland as well. Contrary to the benchmark case of Greece, the importance of islands is lower in Finland. The port facilities are sufficient. State reforms in Finland mean that in the future all seaports will be managed by private companies.	Infrastructures mainly located in South and South West	
Maritime clusters	Maritime clusters in the main seaports for passengers.			
Education	Good standard of schooling Attractiveness of the jobs in Finland	Good standard of schooling		
Training and skills		Widespread presence of merchant marine academies and universities with marine oriented faculties in Finland		
Maritime spatial planning		Advanced maritime management		Conflict of interests in Finland as in the benchmark case of Greece.
Integrated local development	Link of ferry passenger service with coastal (and inland) tourism and living/working in coastal areas.	There is lower importance of ferry services for local development in Finland than in the benchmark case of Greece due to the lower number of islands in Finland.		

Public engagement	The transport strategy is in the process of definition. Cross-border cooperation on ferry passenger services as it strengthen connections between Finland, Estonia and Sweden	Ministry of transports and communication in Finland		Red tape
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Coastal tourism

(Benchmark instance: Sardinia)

	Drivers for Growth		Barriers for Growth	
	from SWOT analysis	from Benchmark analysis	from SWOT analysis	from Benchmark analysis
Maritime research	Research on tourism, though not specifically on coastal tourism		No maritime research specifically linked to coastal tourism	No maritime research linked to coastal tourism
Development and innovation	Development of "Baltic brand" by the different Baltic countries in the framework of the EUSBSR which strengthens the attractiveness of the area	Environmental protection policies, business support policies	Tourism development is not specifically focused on coastal regions but on inland regions such as Lapland). Decrease of international tourism due to economic crisis. Finland has no large notoriety at the international level, ranking 27 th in the GFK Roper Nation Brands Index (source: National Strategy). High price level compared to other destinations, which hampers the attractiveness.	
Access to finance		Public financial support is available	Difficult access to credit	Difficult access to credit
Smart infrastructure	Effective port, airport systems close to the cities and good road system. Good general infrastructures. Accessibility from Russia, notably St Petersburg, which represents the main origin of tourists in Finland	Sufficient rail and road public transport in Finland compared to the benchmark case of Greece	No land access for tourists except from Russia, importance of air transport and maritime transport for people from Baltic Sea countries.	
Maritime clusters	Touristic areas (Helsinki, Turku) are included in maritime clusters			No maritime clusters linked to coastal tourism
Education	Good standard of schooling	Good standard of schooling		
Training and skills	Widespread presence of vocational schools and universities for tourism	Widespread presence of vocational schools and universities for tourism		
Maritime spatial planning	Spatial planning implemented at regional level by Regional Councils. This helps to take into account local issues.	The agency for conservation of coasts ensures an effective management of coastal areas for their sustainable development		
Integrated local development	Tourism brings growth at the regional level. Due to climate change, there is an increase of environmental awareness from tourism and changing attitudes in relation to nature	Advanced urban development planning	High environmental pressure in some areas. Finnish attractiveness at international level is dependent on the state of environment.	High environmental pressure in some areas
Public engagement	National strategy for tourism (objective 2020) – Ministry of Tourism: strengthening clusters and networks, support of growth and development, sustainable development, development of education, improvement of infrastructure, better use of research and market data. Environmental protection	Marketing and advertising investments		

	policies allow maintenance of one of Finland's assets.			
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Short-sea shipping (incl. Ro-Ro)

(Benchmark instance: The Netherlands)

	Drivers for Growth		Barriers for Growth	
	from SWOT analysis	from Benchmark analysis	from SWOT analysis	from Benchmark analysis
Maritime research	Maritime research in Finland: design, energy efficiency, economy, etc. (e.g. from the Centre for Maritime economy studies, from the University of Turku)	Extensive involvement and experience in maritime research; many Universities and R&D institutions involved in maritime research		Reduced funding due to the economic crisis
Development and innovation	Innovation with LNG terminal. Development and innovation in the main seaports: unloading, quality checks, storage, collection, dispatching, and transportation.	Innovation is promoted through a multitude of means	Dependence on general evolution of industry in Finland. Increase of costs (+20-50%) due to implementation of Sulphur Directive (2015) (source: Baltic Rim Economies 13.06.2013)	Strong competition from the Far East
Access to finance		Better than in other member countries of the EU		Difficulties in obtaining shipbuilding credit
Smart infrastructure	Good network of facilities with connections to roads. Development of smart facilities (quicker and safer). Development of port structure functionality through maintenance and investments. Location of the ports close to the customers (main cities and industries). Turku has all the prerequisites to grow at the international level.	First class general infrastructures	There are about 30 seaports and 5 of them gather half of the activity, with some of them closely localised (Turku and Naantali for instance). Profitability difficulties on the connection Helsinki-Stockholm due to high bunker costs. Location of Helsinki port too close to the city, road congestion hampers the activity of the seaport.	
Maritime clusters		Maritime clusters in the main seaports in Finland: Helsinki and Turku	Cooperation among companies of the shipping sector and with downstream companies could be improved.	
Education		Good standard of schooling		
Training and skills	Universities with maritime oriented education	Good professional training at all levels		High cost of salaries and social security contributions
Maritime spatial planning	Spatial planning implemented at regional level by Regional Councils. This helps to take into account local issues.	The European integrated maritime policy concept has been incorporated into policy	Conflicts of interest (land availability in seaports area, cargo routes)	
Integrated local development	Link between shipping and supply/sales of Finnish industries. In the future, development of port through complementary activities such as logistic areas close to the seaports.		Difficulties to maintain activity of seaports in areas where industry is decreasing	Reduced public funding
Public engagement	Strategy on maritime transport in process of definition by the Ministry of Transports and Communication		Most of the seaports are owned by municipalities and public seaports will have private status in 2015. This adaptation is a large challenge for the sector.	Budgetary restrictions

Shipbuilding (excl. leisure boats) and ship repair

(Benchmark instance: Germany)

	Drivers for Growth		Barriers for Growth	
	from SWOT analysis	from Benchmark analysis	from SWOT analysis	from Benchmark analysis
Maritime	Maritime research in	Extensive involvement and		

research	Finland (notably in Turku): Centre for Maritime studies, Centrum Balticum, Turku Schools of Economics	experience in maritime research		
Development and innovation	Specific know-how on Arctic and on research and development. Need to develop niche markets because of high international competition	High level of R&D and innovation. Innovative SMEs and strong position of marine equipment industry	Decrease of the activity of STX company: contract lost in 2012 (awarded to STX France) for cruise liner construction for Royal Caribbean Company. Important international competition: Asia	
Access to finance			Limited access to finance. STX Finland pointed out that one of the reasons for losing the contract awarded to STX France was that the State agreed to grant only EUR 28,3 million instead of the EUR 50 million needed. In April 2013, STX Corporation (South Korea) announced they might sell STX Finland due to risk of bankruptcy.	
Smart infrastructure	Excellent general infrastructures. Opportunity to develop maintenance / ship repair services to reinforce attractiveness for cargos from/to Russian.			
Maritime clusters		Well-organised maritime clusters in the main areas of shipbuilding.		
Education	Universities with maritime oriented education	Very good standard of schooling		
Training and skills	Universities with maritime oriented education	Long tradition of high level specialised training. Skilled and experienced personnel.		
Maritime spatial planning	Maritime spatial planning is effective in Finland and led at the regional level (Regional Council)			
Integrated local development	Limited number of shipyards in Finland (Helsinki, Turku, Rauma). Investment of local institutions in shipyards: cities, regions. Link between shipbuilding and other activities due to the importance of business in each of the shipyards: high level of outsourcing.			
Public engagement	Support from Ministry of Transport and Communication and Ministry of Employment and the Economy, for instance through loans			No public capital in shipyards as in other countries

Yachting and marinas

(Benchmark instance: Italy)

	Drivers for Growth		Barriers for Growth	
	from SWOT analysis	from Benchmark analysis	from SWOT analysis	from Benchmark analysis
Maritime research	Research program on leisure boat construction "Navigating new routes to a Better Boat Industry" 2007-2011. This project focused on four areas: service and business operations,	Government programs of maritime research		

	design and product development, manufacturing and materials, devices and systems (new technologies)			
Development and innovation	Large growth of the sector between 1990 and 2007. Research on innovation to develop niche markets, no ability to compete on costs for Finnish industry, compared to Poland or third countries. Many research and development projects are implemented by companies		Crisis in 2008, activity in progress of recovery. High competition with Poland and third countries	Slow growth of new marinas
Access to finance			Difficult to finance development for SMEs	Difficult access to credit
Smart infrastructure	Large number of marinas along the coast		Services in marinas could be more developed to increase attractiveness of boating, however, Finnish purchases accounts for only 20% of Finnish-produced leisure boats.	
Maritime clusters	Presence of maritime clusters with leisure boat construction			
Education		Universities with maritime oriented education		
Training and skills		Excellence in design and skilled labour		
Maritime spatial planning	Maritime spatial planning is effective in Finland and managed at local level (Regional councils)		Conflict of interest for space management	High environmental pressure in some areas
Integrated local development	Marinas included in local development plans.			
Public engagement	Ministry of transports and communication Ministry of Employment and the Economy Ministry of Tourism	Effective system of safety of navigation and emergency response		

9. List of existing clusters

Five different clusters related to maritime areas have been identified in Finland: Helsinki, Turku, Kotka-Hamina, Vaasa and Meridiem (covering all of Finland). The first four don't have a legal framework but in each case, these clusters gather different sectors and types of organisations (public/private) in a specific geographical area.

Helsinki, the largest city of Finland, hosts many maritime activities. It is firstly a touristic site, welcoming passengers from ferries and cruise ships; it is also an industrial centre with shipping and shipbuilding activities. Helsinki shipyard, Arctech, focuses on Arctic shipbuilding technology (icebreakers and other Arctic offshore and special vessels). It started its activities in 2011 and is a joint venture between STX Finland Oy and Russian United Shipbuilding Corporation. The strength of the Helsinki cluster is also the fact that it is a capital city, which means the presence of a large university, headquarters of Finnish companies and public institutions.

Turku (165 km west of Helsinki) is not as touristic as Helsinki but is one of the Finnish entrances for ferry passengers and maritime freight. Turku port is a frontrunner in Finland on the implementation of liquefied natural gas (LNG) terminal, the distribution of LNG could begin by the end of 2015 with a EUR 60 million investment (Gasum and Port of Turku signed a letter of intent in 2012).

In the Vaasa area, located on the Bothnian Gulf (420 km North of Helsinki), there is large concentration of SME companies focused on leisure ship construction: design, production, etc. In addition, the Energy Institute is located in Vaasa (research, consultancy, projects, education), which focuses, among other areas, on wind energy.

Kotka-Hamina area (130 km east of Helsinki) has developed two major activities related to MEAs: maritime transport and wind energy. Wind energy is not specifically oriented to offshore wind as at present this MEA is still very limited in Finland, but there are spill over effects from onshore wind research and development on offshore wind activity. The most notable companies involved are Winwind Ltd, TuuliWatti and Cursor Oy. Kotka-Hamina is one of the main seaports of Finland and its location on the way to Russia allows the development of maintenance services for ships.

Meridiem is supported by the Maritime Cluster Programme (OSKE). Contrary to the other Finnish clusters mentioned, it has a legal framework and its geographic scope is large, the whole of Finland. It is a networking and coordination organisation for the maritime economy, particularly shipbuilding.

Table 14 - List and analysis of clusters

Cluster	Member State(s)	Maritime economic activities covered	Status	Strengths	Weaknesses
Helsinki	Finland	Cruise tourism Shipbuilding Ferries Coastal tourism Short- (and deep-) sea shipping	Mature	Capital city, university, large companies, public institutions. Shipbuilding joint venture (Arctech Helsinki Shipyard). Location on the way for/from Russia for cargo maintenance.	Decline of the shipbuilding sector Conflicts of interest due to the concentration of activities and limited space. Shipping dependent on evolution of Finnish industries
Turku	Finland	Shipbuilding Short- (and deep-) sea shipping	Mature	LNG terminal (Ferry connexion with Sweden) Location close to the way for/from Russia for cargo maintenance.	Shipbuilding and shipping: see above
Vaasa	Finland	Maritime transport Shipbuilding (leisure) Energy	Mature	SMEs in leisure boat construction. Innovation in leisure boat construction.	Transport: see above Offshore wind energy may not grow largely in Finland before 2020-2030
Kotka-Hamina region	Finland	Short- (and deep-) sea shipping Wind energy	Mature	Location on the way for/from Russia (cargo maintenance)	Offshore wind: see above
Meridiem	Finland	Shipbuilding	Mature	Specific know-how on shipbuilding	Decline of the shipbuilding sector

10. Analysis of maritime strategies at regional and national level, as well as those under preparation and their links with Smart Specialisation Strategies

Maritime Strategies

Only two national strategies related to the five MEAs have been defined, the **National Strategy for Tourism (objective 2020)** and the **Strategy for Maritime Transport**, which is still under preparation.

The **Tourism Strategy** supports the MEAs of Passenger ferry services, Coastal tourism and Yachting and marinas. Its axes and measures are presented below:

- DEVELOPMENT OF THE TOURISM SECTOR
 - Strengthening of tourism clusters and networks
 - Supporting the growth and development of enterprises in the home market and internationally

- Attention to sustainable development in tourism business processes and the supply of services
- 1.4 Development of education in the tourism industry and enhancement of competencies
- Improving the infrastructure of tourism areas
- Better utilisation of research and market data
- REINFORCING THE IMAGE OF FINLAND AS A TOURIST DESTINATION
 - Strengthening tourism marketing
 - Enhancing Finland's international visibility
- GENERAL INDUSTRIAL POLICY STARTING POINTS
 - Development of taxation
 - Value-added tax and other taxes on consumption
 - Electricity tax and other energy taxes
 - Environmentally responsible energy use
 - Supranational discriminatory legislation
 - Improving accessibility
 - Promoting railway traffic
 - Promoting air traffic
 - Promoting year-round activity

The quantitative goals of the Tourism Strategy by 2020 are:

- Share of tourism in GDP: 5,1 % (3,8 % in 2007)
- Government tax revenues: EUR 7,5 billion (EUR 4 billion in 2008)
- Number of jobs in tourism industries: 171 thousand (130,5 thousand in 2007)
- Tourism receipts: EUR 20,7 billion (EUR 11 billion in 2007)
- Number of international arrivals staying at least one overnight in Finland: 5,1 million (3,4 million in 2009)

A **Strategy for Maritime Transport** will be available by the end of 2013 or the beginning of 2014. The maritime strategy will have the following focus areas:

- Training, expertise and employment in the maritime transport sector
- Environmental issues in the maritime transport sector
- Vessel traffic services, maritime safety and rescue services
- Fairways, transport chains and winter navigation
- Port policy
- Subsidies given to and fees charged from maritime transport operators

Table 15 - Policies/interventions towards maritime economic activities, their objectives and links to the most relevant and promising maritime economic activities (see Table 13 for links between most relevant and promising maritime economic activities and blue growth focus areas and objectives)

Level	Strategies	Objectives	Most relevant and promising maritime economic activities
National	Finland's Tourism Strategy to 2020	Development of the tourism sector Reinforcing the image of Finland as a tourist destination General industrial policy starting point	Passenger ferry services
			Coastal tourism
			Yachting and marinas
National	Maritime Transport Strategy for Finland (under preparation)	Training, expertise and employment Environment Vessel traffic services, maritime safety and rescue services Fairways, transport chains and winter navigation Port policy Subsidies and fees	Passenger ferry services
			Short-sea shipping (incl. Ro-Ro)
			Shipbuilding (excl. leisure boats) and ship repair

Table 16 – Most relevant and promising maritime economic activities and ties to blue growth focus areas (top) / Blue growth focus areas and objectives

Most relevant and promising maritime economic activities	Blue growth focus area
Passenger ferry services	Blue energy Maritime, coastal and cruise tourism
Coastal tourism	Maritime, coastal and cruise tourism
Short-sea shipping (incl. Ro-Ro)	Blue energy
Shipbuilding (excl. leisure boats) and ship repair	Blue energy
Yachting and marinas	Maritime, coastal and cruise tourism
Blue growth objectives	
Blue energy:	Enhance the efficiency of harvesting the European energy resources Minimise land-use requirements of the power sector Reduce the European greenhouse gas emissions
Aquaculture:	Contribution to an overall improvement in human diet and more quality merchandise Diversification of coastal communities activities Preservation of fish stock sustainable aquaculture Promote aquaculture based on binding strategic guideline, multiannual national strategic plans and the exchange of best practices
Maritime, coastal and cruise tourism:	Healthy environment Increase the growth potential of activities Increase the attractiveness of coastal areas
Marine and mineral resources:	Advances in technology Security of supply
Blue technology:	Provider of mass-market products High added value specialised products

Smart Specialisation Strategies

The **Tourism Strategy** has not been elaborated in the framework of the RIS3, no information is available on the role of of RIS3 in the elaboration of the **Transport Strategy**, which is in progress of definition.

At national level, the **Regional Development Strategy 2020** and the strategy document **Innovation Targets for 2012-2016** are, to some extent, linked to Smart Specialization Strategies. These strategies don't specifically focus on maritime issues. The first aims at Finland having its own specialised role in the global economy in 2020 based on regional competences and continuous development, the second aims in creating strong thematic and regional innovation concentrations.

At the regional level, all the Finnish regions have already developed innovation or technology strategies and smart specialisation is taken into account to various extents. Six Finnish NUTS 3 regions and two cities joined the EU initiative S3 Platform. In most of the other areas, S3 is taken into account even if the concept is not explicitly used.⁵

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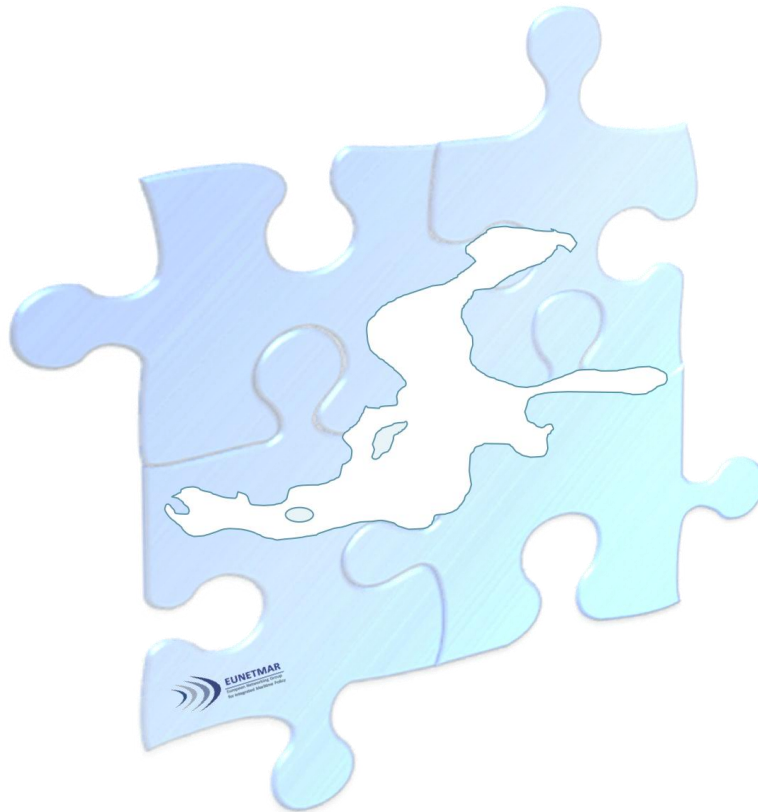
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STUDY ON BLUE GROWTH, MARITIME POLICY AND EU STRATEGY FOR THE BALTIC SEA REGION



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Contents

1. General overview.....	2
4. Marine and maritime economic activities (MEAs)	3
5. Breakdown of maritime economic activities at regional level (NUTS 2) and selection of most relevant region(s) for the study	6
6. List of the 7 largest, fastest growing and with most future potential marine and maritime economic activities	9
0.1 Ranking order of the 7 largest marine and maritime economic activities	9
6.1 Ranking order of the 7 fastest growing marine and maritime economic activities over the 3 past years.....	10
6.2 Ranking order of the 7 marine and maritime economic activities with most future potential	10
7. Growth scenarios for the most relevant and promising marine and maritime economic activities	11
7.1 Description of the nature of each of the 6 maritime economic activities and value chains.....	12
7.2 Description of economic and infrastructural scenario	13
7.3 Regulatory environment of the maritime economic activities	15
8. Growth drivers and barriers to growth for the 6 most promising marine and maritime economic activities	16
9. List of existing clusters	20
10. Analysis of maritime strategies at regional and national level, as well as those under preparation and their links with Smart Specialisation Strategies	21
References.....	23
1. Selection of the most important regions	2
1. 7 Largest maritime economic activities: indicative size of all activities	2
2. 7 Fastest growing maritime economic activities: relative growth of all activities	3
3. 7 maritime economic activities with most future potential: indicators for all activities	4
4. Maritime strategies.....	5

1. Selection of the most important regions

Table 5 - Definition of the maritime economic dimension for coastal NUTS 2

	Water transport (number of persons employed) 1000 persons	Coastal tourism (bed places in coastal NUTS 3) units	Fishing (Gross Tonnage)	Aquaculture (GVA)
Eteläsuomi	2.242	24.348	5.917	3,3
Pohjoissuomi	219	85.754	2.746	3,5
Åland	3.045	12.101	1.239	1,3
Helsinki-Uusimaa	3.497	41.773	2.050	0
Länsisuomi	327	17.257	4.749	2,9
TOTAL	9.329	181.233	16.701	11,0

Table 6 - Ranking order of coastal NUTS 2

	Water transport	Coastal tourism	Fishing	Aquaculture	Score
Eteläsuomi	2,4	1,39	3,5	3,03	10,3
Pohjoissuomi	0,2	4,7	1,6	3,25	9,8
Åland	3,3	0,74	0,7	1,23	6,0
Helsinki-Uusimaa	3,8	2,3	1,2	0,0	7,3
Länsisuomi	0,4	1,0	2,8	2,6	6,8

1. 7 Largest maritime economic activities: indicative size of all activities

Maritime economic activity		GVA (EUR, billion)	Employment (*1000)	Score	Source & reference year
0. Other sectors					
0.1	Shipbuilding (excl. leisure boats) and ship repair	0,19	5,87	3,91	Eurostat 2010
0.2	Water projects	0,05	0,54	0,50	Eurostat 2010
1. Maritime transport					
1.1	Deep-sea shipping	0,03	0,37	0,35	Eurostat 2010
1.2	Short-sea shipping (incl. Ro-Ro)	0,41	4,15	4,11	Eurostat 2010
1.3	Passenger ferry services	0,43	6,69	5,47	Eurostat 2010
1.4	Inland waterway transport	0	0,04	0,03	Eurostat 2010
2. Food, nutrition, health and ecosystem services					
2.1	Fish for human consumption	0,27	5,00	3,84	Eurostat 2010 Annual Economic report on the EU Fishing Fleet, 2012, JRC Commercial Marine Fishery 2011, Finnish Game and Fisheries Research Institute (RKTL)
2.2	Fish for animal feeding	0,001	0,03	0,02	Eurostat 2010 Annual Economic report on the EU Fishing Fleet, 2012, JRC
2.3	Marine aquaculture	0,01	0,279	0,18	Economic Performance of the EU Aquaculture Sector, 2012, JRC Aquaculture 2011, Finnish Game and Fisheries Research Institute (RKTL)
2.4	Blue biotechnology	0	0	0	
2.5	Agriculture on saline soils	0	0	0	
3. Energy and raw materials					
3.1	Offshore oil and gas	0	0	0	
3.2	Offshore wind	0	0,02	0,01	Estimate based on data from Finnish association of wind Energy
3.3	Ocean renewable energy	0	0	0	
3.4	Carbon capture and storage	0	0	0	
3.5	Aggregates mining (sand, gravel, etc.)	Limited activity, no data available	Limited activity, no data available	Limited activity, no data available	

3.6	Marine minerals mining	Limited activity, no data available	Limited activity, no data available	Limited activity, no data available	
3.7	Securing fresh water supply (desalination)	0	0	0	
4. Leisure, working and living					
4.1	Coastal tourism	0,20	6,41	4,20	Eurostat 2010
4.2	Yachting and marinas	0,08	2,29	1,53	Eurostat 2010
4.3	Cruise tourism	0,01	0,23	0,19	Eurostat 2010
5. Coastal protection					
5.1	Coastal protection	0,007	0,071	0,07	Estimate 2010 based on national expenditures - Eurostat
5.3	Protection of habitats	0,001	0,008	0,01	Estimate 2010 based on national expenditures - Eurostat
6. Maritime monitoring and surveillance					
6.1	Traceability and security of goods supply chains	Data not available	Data not available		Data not available
6.2	Prevent and protect against illegal movement of people and goods	Data not available	Data not available		Data not available
6.3	Environmental monitoring	Data not available	Data not available		Eurostat 2010

2. 7 Fastest growing maritime economic activities: relative growth of all activities

Maritime economic activity		GVA (CAGR, %)	Employment (CAGR, %)	Score	Source & Reference year
0. Other sectors					
0.1	Shipbuilding (excl. leisure boats) and ship repair	-22,62	-7,89	-15,26	Eurostat 2010
0.2	Water projects	0,33	-4,00	-1,86	Eurostat 2010
1. Maritime transport					
1.1	Deep-sea shipping	-11,08	9,23	-0,93	Eurostat 2010
1.2	Short-sea shipping (incl. Ro-Ro)	-14,09	3,14	-5,48	Eurostat 2010
1.3	Passenger ferry services	1,83	-2,86	-0,52	Eurostat 2010
1.4	Inland waterway transport	0	0	0	Eurostat 2010
2. Food, nutrition, health and ecosystem services					
2.1	Fish for human consumption	12,36	1,84	7,10	Eurostat 2010 Annual Economic report on the EU Fishing Fleet, 2012, JRC Commercial Marine Fishery 2011, Finnish Game and Fisheries Research Institute (RKTL)
2.2	Fish for animal feeding	8,67	2,54	5,61	Eurostat 2010 Annual Economic report on the EU Fishing Fleet, 2012, JRC
2.3	Marine aquaculture	-8,30	-8,30	-8,30	Economic Performance of the EU Aquaculture Sector, 2012, JRC Aquaculture 2011, Finnish Game and Fisheries Research Institute (RKTL)
2.4	Blue biotechnology	0	0	0	
2.5	Agriculture on saline soils	0	0	0	
3. Energy and raw materials					
3.1	Offshore oil and gas	0	0	0	
3.2	Offshore wind	3,03	0,00	1,52	
3.3	Ocean renewable energy	0	0	0	
3.4	Carbon capture and storage	0	0	0	
3.5	Aggregates mining (sand, gravel, etc.)	No data available	No data available	No data available	
3.6	Marine minerals mining	No data available	No data available	No data available	
3.7	Securing fresh water supply (desalination)	0	0	0	
4. Leisure, working and living					

4.1	Coastal tourism	-13,83	-4,37	-9,10	Eurostat 2010
4.2	Yachting and marinas	-24,79	-12,45	-18,62	Eurostat 2010
4.3	Cruise tourism	0,96	-2,97	-1,01	Eurostat 2010
5. Coastal protection					
5.1 – 5.2	Coastal protection	0,96	-6,95	-3,00	Estimate 2010 based on national expenditures - Eurostat
5.3	Protection of habitats	4,72	-5,72	-0,50	Estimate 2010 based on national expenditures - Eurostat
6. Maritime monitoring and surveillance					
6.1	Traceability and security of goods supply chains	No data available	No data available	No data available	
6.2	Prevent and protect against illegal movement of people and goods	No data available	No data available	No data available	
6.3	Environmental monitoring	No data available	No data available	No data available	

3. 7 maritime economic activities with most future potential: indicators for all activities

INDICATOR	DEFINITION / GUIDING QUESTIONS
Innovativeness	To what extent is the given MEA driven by constant improvements and innovation? Are there significant investments currently or foreseen in the near future in R&D for this MEA in the MS?
Competitiveness	This indicator assesses the position of a given MEA of a MS in the EU/international market. Furthermore, competitiveness is assessed also by comparing the activity of a given country to the same activities of other countries in the same area/sea basin.
Employment	Will the given MEA generate new jobs in the near future? Is the given MEA labour or technology intensive? Does it generate qualified jobs and/or attractive, long-term employment for the given regional labour force?
Policy relevance	Is the given MEA addressed by current or upcoming policy initiatives or regulatory activities in the given MS, especially taking into account EU 2020 ambitions? To what extent is the given MEA influenced by these developments?
Spill-over effects	What impact does the given MEA have on other (including non-maritime) economic activities within the MS?
(Environmental) Sustainability	To what extent is the given MEA in the respective MS influenced by current or upcoming environmental regulation or depends on a good status of the environment? Does the sector have the necessary adaptive capacity?

Maritime Economic Activity		Innovativeness	Competitiveness	Employment	Policy relevance	Spill-over effects	Sustainability	Overall score
0. Other sectors	0.1 Shipbuilding (excl. leisure boats) and ship repair	+	0	+	+	+	0	++
	0.2 Water projects	?	?	+	?	?	?	+
1. Maritime transport	1.1 Deep-sea shipping	+	0	0	+	0	+	0
	1.2 Short-sea shipping (incl. Ro-Ro)	+	0	+	+	0	+	++
	1.3 Passenger ferry services	+	+	+	0	+	+	++++
	1.4 Inland waterway transport	?	?	?	0	?	+	0
2. Food, nutrition, health and ecosystem services	2.1 Fish for human consumption	0	0	-	+	0	+	0
	2.2 Fish for animal feeding	0	0	0	+	0	+	0
	2.3 Marine aquaculture	+	0	0	+	0	+	0
	2.4 Blue Biotechnology	NA	NA	NA	NA	NA	NA	NA
	2.5 Agriculture on saline soils	NA	NA	NA	NA	NA	NA	NA
3. Energy and raw materials	3.1 Offshore oil and gas	NA	NA	NA	NA	NA	NA	NA
	3.2 Offshore wind	+	+	0	+	0	+	++
	3.3 Ocean renewable energy (wave, tidal, OTEC, thermal, biofuels, etc.)	NA	NA	NA	NA	NA	NA	NA
	3.4 Carbon capture and storage	NA	NA	NA	NA	NA	NA	NA
	3.5 Aggregates mining (sand, gravel, etc.)	NA	NA	NA	NA	NA	NA	NA
	3.6 Marine minerals mining	NA	NA	NA	NA	NA	NA	NA
	3.7 Securing fresh water supply (desalination)	NA	NA	NA	NA	NA	NA	NA
4. Leisure, working and living	4.1 Coastal tourism	0	+	+	+	+	+	++++
	4.2 Yachting and marinas	+	0	+	0	+	?	+
	4.3 Cruise tourism	+	+	0	0	0	+	0
5. Coastal protection	5.1 – 5.2 Coastal protection	?	?	+	+	0	+	++

	5.3 Protection of habitats	?	?	0	+	0	+	0
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	+	++
	6.3 Environmental monitoring	+	?	+	+	0	+	+++

4. Maritime strategies

Title of the official document	Level	Responsible body	Maritime strategy concerned	Kind of strategy document / Publishing date	URL
National Strategy for Tourism (objective 2020).	National	Ministry of Employment and the Economy	Coastal tourism Passenger ferry services Yachting and marinas	National strategy for tourism at national level: inland and coastal tourism published in 2010	http://www.tem.fi/files/28018/Finlands_Tourism_Strategy_to_2020.pdf
Maritime Transport Strategy for Finland	National	Ministry of transport and Communications	Passenger ferry services Short-sea shipping Shipbuilding (excl. leisure boat) and ship repair	Strategy under preparation, available by the end of 2013	http://www.lvm.fi/docs/en/2497121_DLFE-18679.pdf