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

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ANNEX 1.7:

COUNTRY FICHE LITHUANIA

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1. General overview

Morphological structure of the coastline

- Lithuania has a coastline of 90,6 km, which represents only 0,07% of the total coastline of the EU-22 coastal Member States and is one of the shortest coastlines among coastal countries.
- The Lithuanian seacoast can be divided into two segments: a sand peninsula (the Curonian Spit, 51 km) and the continental coast (mainland, 38 km). No islands belong to Lithuania.
- The country's coastal zone (within a range of 10 km from the coast) covers 639 km^2, the equivalent of 0,15% of the total EU-22 coastal area.

Population and related social conditions for maritime areas

- In 2012 335.304 people or 11,15% of the country's population lived in the coastal areas. This corresponds to 0,07% of the total EU-22 coastal population.
- In 2010 157.000 persons, the equivalent of 11.69% of Lithuania's labour force, were employed in the country's coastal region. This corresponds to 0,08% of the labour force in all the EU-22 coastal Member States.
- In 2012 total unemployment in the population aged 20-64 years in Lithuania's coastal NUTS-2 regions (which is the whole country) was about 191 thousand people representing 0,86% of the unemployed persons in all the EU-22 coastal Member States.

Economic role of maritime areas over the national total

- The Gross Domestic Product (GDP) per capita in Lithuania's coastal regions was about EUR 9.100 (2010) or 2,1% higher than the national average GDP per capita, which was about EUR 8.900.
- Lithuania's coastal regions were responsible for EUR 3,03 billion of gross value added (GVA), which is 12,23 % of the nation's EUR 24,78 billion GVA in 2010.

GVA – Details by NACE activities

Sector	GVA of the coastal regions (billion EUR)	Share in the national GVA for the sector
Agriculture, Aquaculture and Fishing (A)	0,07	8,27
Manufacturing (C)	0,61	12,29
Construction (F)	0,16	11,27
Wholesale and retail trade; transport; accommodation and food service activities; information and communication (G-J)	1,32	15,29

Employment – Details by NACE activities

Sector	Employment of the coastal regions (thousand)	Share in the national GVA for the sector
Agriculture, Aquaculture and Fishing (A)	11,50	9,48
Manufacturing (C)	25,70	12,35
Construction (F)	13,10	14,07
Wholesale and retail trade; transport; accommodation and food service activities; information and communication (G-J)	44,00	11,25

2. Marine and maritime economic activities (MEAs)

Table 1 - Overview of relevant maritime economic activities in Lithuania 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	0,068	3,483	114		Eurostat (2010)
0.2	Water projects	0,010	0,872	21		Eurostat (2010)
1. Maritime transport						
1.1	Deep-sea shipping	0,013	0,237	30	25% of goods transported by DSS in 2010	Eurostat (2010)
1.2	Short-sea shipping (incl. Ro-Ro)	0,039	0,699	89	75% of goods transported by SSS in 2010	Eurostat (2010)
1.3	Passenger ferry services	0,082	0,816	2	1,7 million passengers carried by local ferry service (2012); 340 thousand international passengers (Sweden & Germany).	Eurostat: NACE 50.10 confidential data.
1.4	Inland waterway transport	0,003	0,143	14		Eurostat (2010): NACE 50.40 confidential data
2. Food, nutrition, health and ecosystem services						
2.1	Fish for human consumption	0,098	7,84	396	Catches in the Baltic Sea: 15.476 t (2010), 193 fishing vessels (at the beginning of 2010, 171 fishing vessels at the end of 2010), export 92,3 thousand t, import 110,8 thousand t (2012)	Eurostat (2010) JRC Scientific and technical reports (2012): The 2012 Annual Economic Report on the EU Fishing Fleet Fishery Department of Ministry of Agriculture (2013)
2.2	Fish for animal feeding	0	0	0	Less than 0,5% of total production according to PRODCOM	Eurostat (2010)
2.3	Marine aquaculture	0	0	0	No marine aquaculture developed, R&D on-going. In 2012: 21 companies, 4.512 tons of fish grown in 2012 (all freshwater).	Fishery Department of the Ministry of Agriculture (2013)
2.4	Blue biotechnology	0	0	0		
2.5	Agriculture on saline soils	0	0	0	No saline soils in Lithuania	The Saline and Sodic Soils Map, Joint Research Centre
3. Energy and raw materials						
3.1	Offshore oil and gas	0	0	0	There is no offshore oil and gas extraction.	Eurostat (2010)
3.2	Offshore wind	0	0	0	225 onshore wind power units installed in 2012; wind power share of total electricity consumption: 4 %, (EU: 7%). No offshore wind power units.	European statistics EWEA (2013)
3.3	Ocean renewable	0	0	0		

	energy					
3.4	Carbon capture and storage	0	0	0		
3.5	Aggregates mining (sand, gravel, etc.)	0	0	0	Marine aggregates share of total aggregates production: 0	European Aggregates Association (2010)
3.6	Marine minerals mining	0	0	0		Lithuanian Department of Statistics (2010)
3.7	Securing fresh water supply (desalination)	0	0	0		
4. Leisure, working and living						
4.1	Coastal tourism	0,011	1,51	317		Eurostat (2010), Lithuanian Department of Statistics (2010)
4.2	Yachting and marinas	0,003	0,19	19		Eurostat (2010)
4.3	Cruise tourism	0,002	N/A	N/A	According to Eurostat, all passengers were non-cruise (2010). According to the port authority information in 2011: 21.478 cruise passengers visited Klaipeda. In period 2001-2012: 562 cruise ships and 280 thousand passengers. Proxy GVA: EUR 1,76 million	Eurostat: NACE 50.10 confidential data Eurostat: Mar_pa_aa (2010) Ministry of Transport and Communications, Klaipeda Sea Port Authority (2011)
5. Coastal protection						
5.1	Coastal protection	0,008	0,100	3	Public expenditure used as proxy for GVA	JSC "Šilutės polderiai" annual report (2011 State environment protection agency (2010)
5.3	Protection of habitats	0,012	0,054	1	Government expenditures for protection of biodiversity and landscape	Eurostat (2010) State service for protected areas (2012)
6. Maritime monitoring and surveillance						
6.1	Traceability and security of goods supply chains	0,002	0,120	1	Public expenditure used as proxy for GVA	Lithuanian Maritime Safety Administration (2010)
6.2	Prevent and protect against illegal movement of people and goods	0,006	0,464	1	Public expenditure used as proxy for GVA	State Board Security Department (2010)
6.3	Environmental monitoring	0,015	0,200	1	Public expenditure used as proxy for GVA	Eurostat (2010) State Environment Protection Department (2010)

Table 2 Overview of relevant sub-functions in Lithuania 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	Two types of services can be distinguished in the ship repair segment, namely minor repairs and maintenance and ship conversion. In addition to activities of technical inspection, ship supply and repair services, companies are also involved in stevedoring and activities of terminals. The shipbuilding segment is predominantly that of short-term relations due to the fact that shipbuilding is a project-based activity. More regular trade relations are maintained with Denmark,	In 2009, exports of vessels and other floating structures amounted to around EUR 133 million (49% of combined turnover in the sector).	Feasibility study for the development of the Lithuanian maritime sector, SAVVIN (2011)

		Germany and Norway; in the period between 2004 and 2009 the sector exported to these countries every year.		
0.2	Water projects	This MEA includes port dredging, maintenance and service activities related to the sector. There are about 30 companies, generating about 3.500-3.600 jobs in Klaipeda city and the region.	In 2013, the dredging of the entire port fairway up to -14,5 m. is to be carried out. Volume of sediments to be dredged: 4,5 million m^3. Cost of the dredging operations: EUR 37,5 million.	An Overview of Marine Industry Cluster in Klaipeda Region (2010)
1. Maritime transport				
1.1	Deep-sea shipping	The infrastructure of the seaport of Klaipeda is developed: specialised terminals are available, well-developed intermodal transportation system; POST-PANAMAX type ships are able to access.	Cargo turnover in Klaipeda port (2012): EUR 10,20 million, mainly fertilizers, oil products, Ro-Ro containers. About 25% of the goods handled in the Lithuanian ports correspond to deep-sea shipping. There has been constant increase observed in the volume of goods handled (from 5,9 thousand tonnes in 2007 to about 10,5 thousand tonnes in 2011). Employment trends closely follow trends in cargo handling.	Eurostat (2010) Ministry of Transport and Communications Klaipeda Sea Port Authority (2012)
1.2	Short-sea shipping (incl. Ro-Ro)	Short-sea shipping accounts for about 75% of the total goods handled in the Lithuanian ports. This is one of the few sectors of Lithuania's economy where exports exceed imports and it is a significant engine to the country's entire economy. In the last decades, development of Lithuania's maritime industries has attracted EUR 64 million in public investments. The main national shipping companies are gradually increasing their ships' tonnage and renewing their fleet.	Since 2005 (except 2009 when a slight decrease was observed) there has been a constant increase observed in the volume of goods handled (in 2008 by 22,8%, in 2010 by 11,3% and in 2011 by 13,7%). Employment trends closely follow trends in cargo handling. One working place of a sailor creates four or five working places on shore in such areas as ship repair, loading, ship stevedoring, provisioning and infrastructure services.	Eurostat (2010, 2011)
1.3	Passenger ferry services	Passenger ferry services play a significant role in the country's economy. The leading port is Klaipeda port for these services. The ferry services are of vital importance for residents of the town of Neringa traveling to Klaipėda, as well as for Klaipėda residents traveling to Smiltynė either on business or for pleasure. International ferry lines connect to Germany, Sweden.	In 2010, 166 thousand passengers were embarked/disembarked in Lithuanian ports. According to Eurostat, all passengers were non-cruise. The ratio between inward and outward passengers is 49/51. This MEA generates higher GVA than short-sea and deep-sea shipping together, and it employs more persons (by about 13%) than the shipping sector.	Eurostat: Mar_pa_aa (2010)
1.4	Inland waterway transport	The inland waterway transport system has only 392 km of inland water roads, 3 international water roads.	Inland water systems do not generate valuable input to the economy of Lithuania.	Eurostat (2010) Lithuanian inland water authority (2011)
2. Food, nutrition, health and ecosystem services				
2.1	Fish for human consumption	In 2011, the Lithuanian fishing fleet consisted of 171 registered fishing vessels with a gross tonnage of 45,96 thousand GT. The size of fishing fleet has followed a decreasing trend between 2008 and 2011. The total number employed persons also fell by 31%. The number of vessels declined by 31,6% (or 79 vessels). The total number of fishing enterprises was 113. The vast majority, almost 69% of fishing enterprises owned a single vessel and 28% - two to five vessels. In 2011-2012, the sector showed an increase in volume and value of landings with respective increase in income. The capacity of the processing industry is much larger than local	77,7 thousand tons of fish products were produced in 2010 and since 2008 the annual turnover of the fish processing sector is increasing (increase by 35% in 2011 comparing with 2008). About 92% of the GVA generated by the fisheries sector and 88% of the number of persons employed relates to the fish processing sector.	European market observatory for fisheries and aquaculture products (2010) Fishery and Fish culture Challenges in Lithuania (2009) Prodcom (2010) JRC Scientific and technical reports (2012): The 2012 Annual Economic Report on the EU Fishing Fleet (2012)

		consumption opportunities. Still seafood product consumption on the national market is relatively low – 15 kg/capita. There are 69 fish processing companies registered in Lithuania: all of them are certified to export into the EU market and Russia. The fish processing sector is an export-oriented sector, exporting about 92 thousand tones a year. Main export markets: Latvia, Russia, Germany and Estonia.		
2.2	Fish for animal feeding	Almost 100% of total landings are used for human consumption. The production volumes of fish unfit for human consumption are not significant (less than 5% of the total value sold annually).	So far this MEA does not have significant impact on the socio-economic indicators.	Eurostat (2011), Prodcom (2010)
2.3	Marine aquaculture	Only in-land or freshwater aquaculture exists in Lithuania and marine aquaculture is not developed due to the weather, streams and water conditions in the sea.		Fisheries Department of the Ministry of Agriculture (2013)
2.4	Blue biotechnology	Scientific work is on going on microalgae diversity and potential for biotechnology.		Blue Biotechnology in the Baltic Sea Region New Strategies and Future Perspectives - Submariner project (2012)
2.5	Agriculture on saline soils	Not relevant in Lithuania		The saline and Sodic Soils Map, Joint Research Centre
3. Energy and raw materials				
3.1	Offshore oil and gas	There are no offshore oil and gas platforms operating at the moment. An oil pipeline is used to load petroleum products and to get oil from the tanks and transport it to the petroleum refinery. Its production capacity affects loading operations in the Port of Klaipeda and the energy sector.		Eurostat (2010) Klaipeda State Sea Port Authority
3.2	Offshore wind	This sector is non-existent in Lithuania at the moment. One of the most important factors affecting the wind energy capacity is a system of power networks	225 onshore wind power units, 0 offshore wind power units	Feasibility study for the development of the Lithuanian maritime sector, SAVVIN (2011)
3.3	Ocean renewable energy	Sector is not relevant in Lithuania.		Experts knowledge
3.4	Carbon capture and storage	Sector is not relevant in Lithuania.		Experts knowledge
3.5	Aggregates mining (sand, gravel, etc.)	There is mining of gravel and sand pits. Mining of clays and koalin is rather small. However, a marine aggregates mining does not exist.	GVA: EUR 0.018 billion, 921 employees but marine aggregates part is 0.	Eurostat (2010). UEPG (2010)
3.6	Marine minerals mining	Sector is not relevant in Lithuania.		Experts knowledge
3.7	Securing fresh water supply (desalination)	Sector is not relevant in Lithuania.		Ministry of Environment
4. Leisure, working and living				
4.1	Coastal tourism	The region of western Lithuania is essential in ensuring the development of recreation and tourism on the marine and inland waters. The Baltic Sea, the Curonian Lagoon and other inland water bodies offer possibilities to develop tourism products devoted to an active rest.	Sea related recreation activities do not account for a large business share in economic terms due to the short summer season, weather, and service capacities. Accommodation and tour operator indicators show an increase in the number of guests especially from abroad.	Eurostat (2010), Lithuanian State Tourism Department under the Ministry of Economics (2012)
4.2	Yachting and marinas	Sea related recreational boating is a very small economic activity.	21 marinas are located on the coastal zone (with 10-200 places).	Eurostat (2010) Master Plan of Klaipeda County - 2020 (2002)
4.3	Cruise tourism	Cruise ships started operating in Klaipeda in 2003, when the cruise	The largest number of ships was received in 2007 and has	Klaipeda State Sea Port Authority

		terminal was built. Annually from 28 to 65 cruise ships visit Klaipėda, bringing about 30-35 thousand cruise passengers. Cruise tourism is a growing contributor to society.	decreased by 18% in 2011, mainly due to tax policies of the port administration. This sector has both a direct and indirect economic impact on the whole region.	statistic archive (2010).
5. Coastal protection				
5.1	Coastal protection	The Lithuanian coast suffers intensive erosion due to wind and wave action. In the last decade, the problem has been severely aggravated by human interventions such as the construction of hydro-technical works, deepening of the Klaipeda port and recreational activities. Rising sea level and more frequent winter storms lead to more frequent floods in the coastal zone (especially on the River Nemunas delta). It is expected that destruction of the Baltic Sea shores and degradation of the dunes will increase and the average height of waves will keep growing bigger. Saltwater intrusion and resulting changes in the coastal ecosystems have been identified as a problem in the north of the Curonian Lagoon. The Lagoon is a semi-enclosed almost freshwater body, which is separated from the sea by a narrow sandy spit. Historically, engineering techniques have been employed – seawalls, dykes, breakwaters, jetties and armoured revetments for the protection of maritime assets from assault by the sea.	Safeguarding the continental coast in 2008-2013 cost about EUR 5,8 million. The area vulnerable to flooding extends approx. 550 km^2. For the implementation of the EU Flood Directive, in period of 2010-2013 a special programme for water protection and management planning was developed with a budget of EUR 3,13 million. Sand nourishment is used on the almost 3 km long Palanga beach. According to "Coastal zone management Programme 2008-2013" investments for the nourishment of beaches amounted to EUR 4,9 millions in the period 2005-2013.	State of the Coast of the South East Baltic SD14SEB project report, (2008) Environment protection agency (2012) State of the Coast of the South East Baltic SD14SEB project report (2008) "Coastal zone management programme 2008-2013", (2008)
5.3	Protection of habitats	Habitat loss increases with increasing distance from the coastline. There are 239 km^2 of marine protected areas in Lithuania. Marine environment monitoring is part of the Research Department of the Ministry of Environment.	Semi-natural habitat covers 58% of the coastal area, compared to 41% of non-coastal area.	State of the Coast of the South East Baltic", SD14SEB project report, (2008) United Nations Statistics Division (2010)
6. Maritime monitoring and surveillance				
6.1	Traceability and security of goods supply chains	Lithuanian Maritime Safety Administration tasks are: implementation and compliance control of international maritime legal acts which regulate maritime safety and prevention of pollution from ships as well as related national legislation.	In 2012, the state budget expenditure for this function EUR 1,7 million. In 2012 173 from 1.559 ships visiting Klaipeda port were inspected.	Official report of Lithuanian Maritime Safety Administration (2012)
6.2	Prevent and protect against illegal movement of people and goods	Lithuanian border guards protect and control 1.070 km external border of the EU and Schengen Area (1/10 of all Schengen land border).The Coast Guard Border Police District are assigned to guard a section of the border with the Russian Federation's Kaliningrad Oblast in the Curonian Lagoon and the Baltic Sea, to secure the boundaries of territorial waters, and guard a border section with Latvia in the sea and on land. Border line in the sea - 44.4 km (Russia and Latvia) and 18.5 km - in the Curonian lagoon (Russia).	In 2012 expenditure for the State Border Defence (Coast Guard) was EUR 7,8 million and increased in last 3 years (EUR 6,3 million in 2009); 527 employees are working in the subsector (2012).	State Border Guard Service of Lithuania (2012).
6.3	Environmental monitoring	The Marine Research Department monitors the marine environment and implements the State Environment protection control and monitoring programme. It performs and coordinates the environmental monitoring of the South-eastern Baltic Sea and the Curonian Lagoon, investigates extreme situations (fish	EUR 2,8 million for "State environment prevention control and monitoring programme " are spend every year and 200 employees are involved.	Environment protection Department of Lithuania (2012)

		decay, oil spills and water 'blooming'), simulates the drift of a slick of spilled oil, carries out hydrometeorology observations of the littoral zone and the observations of the coastal dynamics of the Baltic Sea and the Curonian Lagoon, performs special research into harbour dredging, hydro technical construction, soils dumping in the sea, participates in the international (HELCOM) monitoring programme of the Baltic Sea and other international projects.		

3. List of the 7 largest, fastest growing and most promising marine and maritime economic activities

2.1. Ranking order of the 7 largest marine and maritime economic activities

The seven largest MEAs, listed in Table 3, 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 Lithuania).

Table 3 - Ranking order of the 7 largest maritime economic activities in Lithuania at NUTS-0 level

Rank	Maritime economic activity	GVA (billion EUR)	Employment (*1000)	Score
1	Fish for human consumption	0,098	7,84	4,41
2	Shipbuilding (excl. leisure boats) and ship repair	0,068	3,48	2,08
3	Passenger ferry services	0,082	0,816	0,82
4	Coastal tourism	0,011	1,51	0,81
5	Short-sea shipping (incl. Ro-Ro)	0,039	0,699	0,54
6	Water projects	0,010	0,872	0,48
7	Prevent and protect against illegal movement of people and goods	0,006	0,464	0,26

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

The seven fastest growing MEAs, listed in Table 4, 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 Lithuania). This period overlapped with the financial and economic crisis, which negatively influenced the performance of each economic sector (decrease of generated GVA volumes and employment was observed).

Table 4 - Ranking order of the 7 fastest growing maritime economic activities in Lithuania at NUTS-0 level

Rank	Maritime economic activity	GVA (CAGR)	Employment (CAGR)	Score
1	Environmental monitoring	16,9	0,0	8,5
2	Yachting and marinas	-6,7	-3,3	-5,0
3	Traceability and security of goods supply chains	-10,8	-1,5	-6,1
4	Protection of habitats	-15,8	0,0	-7,9
5	Fish for human consumption	-10,71	-8,88	-9,79
6	Shipbuilding (excl. leisure boats) and	-17,6	-18,6	-18,1

	ship repair			
7	Coastal tourism	-21,5	-18,1	-19,8

2.3. Ranking order of the marine and maritime economic activities with most future potential

The seven MEAs with most future potential, listed in Table 5, 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 Lithuania).

Table 5 - Ranking order of the 7 maritime economic activities with most future potential in Lithuania at NUTS-0 level

Rank	Maritime economic activity	Score
1-3	Short-sea shipping (incl. Ro-Ro)	++++
1-3	Shipbuilding (excl. leisure boats) and ship repair	++++
1-3	Coastal tourism	++++
4	Water projects	+++
5-11	Deep-sea shipping	++
5-11	Fish for human consumption	++
5-11	Yachting and marinas	++
5-11	Cruise tourism	++
5-11	Traceability and security of goods supply chains	++
5-11	Prevent and protect against illegal movement of people and goods	++
5-11	Environmental monitoring	++

4. Growth scenarios for 6 of the most relevant and promising marine and maritime economic activities

Table 6 - Sets of top maritime economic activities ranking in order of size/growth/scores

Top-7 current size	Top-7 recent growth	Top future potential
Fish for human consumption	Environmental monitoring	Short-sea shipping (incl. Ro-Ro)
Shipbuilding (excl. leisure boats) and ship repair	Yachting and marinas	Shipbuilding (excl. leisure boats) and ship repair
Passenger ferry services	Traceability and security of goods supply chains	Coastal tourism
Coastal tourism	Protection of habitats	Water projects
Short-sea shipping (incl. Ro-Ro)	Fish for human consumption	Deep-sea shipping
Water projects	Shipbuilding (excl. leisure boats) and ship repair	Fish for human consumption
Prevent and protect against illegal movement of people and goods	Coastal tourism	Yachting and marinas
		Cruise tourism
		Traceability and security of goods supply chains
		Prevent and protect against illegal movement of people and goods
		Environmental monitoring

Table 7 - 5 most relevant and promising marine and maritime economic activities[1]

5 most relevant and promising maritime economic activities
Short-sea shipping (incl. Ro-Ro)
Shipbuilding (excl. leisure boats) and ship repair
Fish for human consumption
Water projects
Coastal tourism

The following criteria were applied for selection of the 5 most promising MEAs:

- Short-sea shipping was chosen as one of the promising maritime activities in Lithuania because it has growth opportunities across several areas, namely technological development, increasing the competencies of its workforce/human resources and employing economies of scale. It is one of the few sectors of Lithuania's economy where exports exceed imports and it is a significant engine to the country's entire economy.
- The Shipbuilding (excl. leisure boats) and ship repair sector is one of the promising in the country due to its ability to provide higher value added products, such as building new ships using conventional and renewable energy resources (wind, solar, wave energy), develop propulsion systems with higher efficiency factors for new ships, new and more efficient systems of shipbuilding, maintenance and ship processing in ports and similar activities.
- It is expected that Fish for human consumption MEA will remain important in Lithuania because traditional fishing plays an important role in the overall development of the coastal areas by providing various job opportunities, while the fish processing sector – which is export oriented – will continue to contribute to the gross domestic product.
- In light of the expected harbour dredging, reconstruction and repair of quays of ports, the Water projects MEA is one of the most relevant and promising maritime economic activities and it has great potential in terms of environmental sustainability.
- Coastal tourism is seen as a new emerging opportunity for a sustainable development of the Klaipeda region based on the key strengths of the Curonian lagoon as an area with outstanding natural beauty where coastal regions carry important cultural significance.

These MEAs have the following contributions to sustainability:

- Short-sea shipping (incl. Ro-Ro), through activities of the port of Klaipeda and Butinge Terminal and spill-over effects with other economic sectors contributes to both socio-economic and environmental sustainability aspects.
- Shipbuilding (excl. leisure boats) and ship repair activities contribute significantly to socio-economic sustainability. With regard to environmental sustainability, ship repair activities differ from shipbuilding and have some impact on the environment. The environmental impact of conversion processes of ship building and repair is minimised by providing newest technologies, new eco-innovative building and and retrofitting processes.
- The development of the MEA Fish for human consumption and its competitiveness are closely linked with the sustainability and recovery of fish stocks, as well as use of available fish resources in a sustainable way.
- Water projects are interconnected with port development (harbour dredging, reconstruction and repair of quays) and have great potential in terms of socio-economic and environmental sustainability.
- Coastal tourism in Lithuania is very closely related with the Curonian Lagoon and the Curonian Spit (Kuršių Nerija) with its beautiful nature and the unique landscape of towering dunes. In order to create safe, stable and attractive coastal environments with clean water and healthy coastal habitats it is necessary to develop well-managed sustainable coastal tourism.

[1] Only 6 and not 7 MEA qualify as "most relevant and promising" in Lithuania for the purpose of this study.

4.1 Description of the nature of each of the 6 maritime economic activities and value chain

Short-sea shipping (incl. Ro-Ro)

In 2012 the cargo turnover at the Port of Klaipeda, including the Butinge Terminal, grew to 36,6 million tons – nearly twice that of 2002. Cargo loading volumes, which 10 years earlier were several times higher than unloading volumes, have almost levelled in recent years. Even though transporting partners have remained essentially the same – that is Russia and Belarus – local agencies could provide services which embrace all main ports in all Baltic Sea, Europe and the whole world by using their multi-purpose fleet.

Klaipėda Port is capable of accommodating large tonnage vessels: dry cargo vessels (100.000 DWT), tanker vessels (160.000 DWT) and container ships (6.000 TEU).

Shipbuilding (excl. leisure boats) and ship repair

Two types of services can be distinguished in the ship repair segment, namely minor repairs and maintenance and ship conversion. In addition to activities of technical inspection, ship supply and repair services, companies are also involved in stevedoring. Some companies are highly specialised and provide isolation services as well as welding and assembly works. Meanwhile, ship conversion activities are often undertaken by companies operating in the shipbuilding segment.

The shipbuilding segment is predominantly that of short-term relations due to the fact that shipbuilding is a project-based activity. In 2009, exports of vessels and other floating structures amounted to around EUR 133 million (49% of combined turnover in the sector) and were going to seven countries. In the period between 2004 and 2009, Lithuanian shipbuilding and repair companies cooperated with 22 countries in total.

More regular trade relations are maintained with Denmark, Germany and Norway; in the period between 2004 and 2009 the sector exported to these countries every year. Exports to Norway grew 137 times, from EUR 135 thousand in 2004 to EUR 18,5 million in 2009. Exports of ferries accounted for the majority of this income. Norway was also buying ships, rescue ships predominantly. In 2009, products exported to Denmark were floating structures, such as rafts, tanks, docks and buoys (with a total value of EUR 71 million). Another buyer of this type of products was Finland, though the main products exported to this country were sea ferries (EUR 13 million). The only products exported to Germany in 2009 were floating or submersible drilling and commercial fishing platforms.

Fish for human consumption

Fisheries activities are among those maritime economic activities of most significance to the region. Four main branches of the MEA are being developed in Lithuania: sea fisheries, fishing in inland waters, aquaculture and the fish processing industry. With very strict requirements for fishing in the Baltic Sea and the protection of fish resources becoming stricter, this branch is being restructured, with ever increasing attention is being paid to the development of aquaculture and recreational fishing.

For this maritime economic activity the biggest issue is the shortage of fishing quotas. Fishing in all territories of operations is limited and strictly regulated. The sector's development opportunities are constrained by restrictions on acquisition of new vessels. The Lithuanian fishing fleet is obsolete (the newest ship is more than 20 years old) and inefficient. The size of the Lithuanian fleet decreased between 2008 and 2011 by 31,6% (or 79 vessels). These were mostly fishing vessels engaged in the coastal fishing activities which were scrapped as part of the fleet capacity reduction plan.

In 2009 Lithuanian fishing vessels landed approximately 27 thousand tons of fish from the Baltic Sea (15% of total catches, incl. high-seas). Baltic sprat accounted for 72,8% of the Baltic Sea catches and Atlantic cod and Baltic herring accounted for 11% and 14 % of total Baltic Sea catches respectively. However, the biggest growth in fishing yield was observed in high-seas, such as waters in Mauritania and off the Moroccan coast.

The fish processing sector is a well developed economic sector. It is an export oriented sector due to the limited demand in the local market and long-standing traditions. Fishery products are mainly exported to the United Kingdom, Germany and Denmark. Fish fillet and other fish products in a variety of forms (frozen, chilled or fresh) accounted for the largest portion of exports (63,51%). The most popular fish species are cod, herring, Norway redfish and European plaice.

Lithuania has the only auction of fish and fishery products in the Baltic States, the Klaipeda Fish Auction, which started its operations in 2007. The auction aims to facilitate and speed up the sale of fish to processors. Among the participants of the auction are processors and fishermen from other countries (Latvia, Poland, Russia (Kaliningrad), Estonia and France). Further development of auction operations and attraction of new participants could create new opportunities for the local fish processors (by increasing fish supply and expanding product range) and contribute to the image of Klaipeda as a fisheries centre that offers innovative and high quality services.

Water projects

The Ministry of Transport and Communications and the State Enterprise Klaipėda State Seaport Authority pay particular attention to the port development. Within the period from 1994 to the end of 2010 the Seaport Authority invested EUR 434 million into port infrastructure, of which EUR 246 million went to the construction and reconstruction of quays, EUR 86 million to the deepening of port water area and EUR 39 million to railway construction and reconstruction. The outer entrance channel of the seaport has been deepened to a depth of 15 m, the shipping channel to 14,5 m, the remaining section of the shipping channel leading to the International Ferry Terminal to 13 m. The seaport has become a deep seaport.

A feasibility study and the evaluation of environment impact were initiated in regard to the Klaipėda Seaport development by construction of the outer deep-water port.

In 2004 the Government of the Republic of Lithuania established the Šventoji State Seaport and in 2009 allocated to it a 15,33 ha site of state-owned land and 209,6 ha of outer water area. In 2010 this was approved by the amendment of the Law on Šventoji Seaport.

Coastal tourism

In 2009, accommodation establishments operating in the Klaipeda District hosted 326 thousand guests (22,9 % of all visiting tourists in Lithuania), out of which 122 thousand were foreigners (16,2 % of all visiting foreign tourists).

The region of western Lithuania is crucial in assuring the development of recreational activities and tourism on the marine and inland waters. The Baltic Sea, the Curonian Lagoon and other inland water bodies create possibilities to develop tourism products devoted to an active rest. Prospects of recreation and tourism are related to a better use of the natural-cultural potential of the coastal region. The Curonian Spit (Kuršių Nerija) National Park is classified as UNESCO World heritage. It is noted for its beautiful nature and the unique landscape of towering dunes. Other protected NATURA 2000 territories are also significant for their natural values: the Nemunas Delta and Seaside Regional Park, the Curonian Lagoon Biosphere polygon, the Baltic Sea Talasologic Reserve. The most popular activities for tourists coming to the Port of Klaipeda are visiting Palanga, Nida and Sventoji.

Maritime recreation and tourism are above all linked to cruise ship tourism and more efficient use of the sea coast, the Curonian Lagoon and the Nemunas mouth to attract cruise ship passengers, recreational fishing, for composite (ship-bicycle, etc.) tourist trips across coastal territories. To promote growth in this sector, tourist research and surveys of the maritime sector are needed. Research on tourism flow and ship routes is particularly important for establishing optimum routes, expanding and developing sightseeing sites, creating new tourist attraction centres and other tourism products.

4.2 Description of economic and infrastructural scenario

Short-sea shipping (incl. Ro-Ro)

In the Long-term Development Strategy of the Lithuanian Transport System (until 2025), one of the aims is to increase the potential scope of passenger and freight maritime transport, the competitiveness of the port of Klaipeda and Butinge Terminal and the entire water transport capacity of the Baltic Sea Region. The strategy also foresees the development of short sea shipping and motorways of the sea, inland waterways, multimodal and intermodal transportation, the establishment of water transport lines connecting Klaipeda sea and inland ports to other European ports, promoting maritime and inland waterway transport so that Lithuania contributes to the trans-European shipping network as well as the creation of the network of inland waterways of international importance.

One of the potential areas for growth of this maritime economic activity is stevedoring operations. As far as competition goes, many Baltic seaports are very similar in terms of operations and they are strong competitors. Creation of the Klaipeda Free Economic Zone had a positive impact on the growth of stevedoring companies. Long term contracts with some of the companies allowed the sector to secure stability of operations. The sector sees growth opportunities across several areas, namely technological development, increasing the competencies of its workforce / human resources and employing economies of scale. Regarding technological developments, companies in this sector purchase technologies all around the world as well as develop some of them themselves. Among the technologies most relevant is the application of stevedoring equipment and methods to a variety of cargos. This growth scenario is closely linked to the socio-economic and environmental sustainability of the sector.

In the end of the year 2011 the Register of Seagoing Ships of the Republic of Lithuania included 121 registered ships with a tonnage of 439.341 GT, of which: 33 cargo ships, 7 Ro-Ro passenger ferries, 13 transport refrigerators, 48 fishing vessels, 13 towboats, 7 vessels of special purpose.

Main players:

- Containership (former Kuršių linija), UAB – fleet: 12 container vessels in operations
- DFDS SEAWAYS– fleet: 6 ships
- Limarko Shipping Company, AB -16 vessels
- AB "Lietuvos jūrų laivininkystė" (Lithuanian Shipping Company) - 11 vessels.

Shipbuilding (excl. leisure boats) and ship repair

In the past the shipbuilding sector in Europe and also in Lithuania shrunk several times, with leading positions taken over by Asian shipbuilders driven by cheaper workforces and heavy subsidising from the state. For these reasons the shipbuilding sector in Lithuania is now changing direction and transforming toward building more complex ships of higher value added.

Although GVA generated by this MEA and number of persons employed decreased significantly since 2008, mainly influenced by the financial and economic crisis and strong competition in the sector, it is expected that the shipbuilding sector will develop in Lithuania providing higher value added products, such as building new ships using conventional and renewable energy resources (wind, solar, wave energy), developing propulsion systems with higher efficiency factors for new ships, new and more efficient systems of shipbuilding, maintenance and ship processing in ports and similar activities. Although the impact of the sector on social indicators is decreasing, it is still considered as one of the economic sectors with strong links with socio-economic sustainability.

The ship repair business differs from shipbuilding and has some impact on the environment. As the industry has to fulfil a wide range of constantly increasing requirements in the scope of environmental legislation and regulation, the environmental impact of ship repair and conversion processes must be also reduced using the newest technologies. Providing practical and cost effective solutions for new eco-innovative ship repair and retrofitting processes is a new challenge and opportunity for Lithuanian shipbuilding and repair yards.

According to the long-term development Strategy of the State (28/11/02) Lithuanian shipbuilding yards are classified as enterprises with a good prospect for growth and significant impact on the country's economy. Currently the Lithuanian shipbuilding and repair industry development strategy until 2020 is under preparation, which clearly shows that shipbuilding is among the strategic economic sectors in Lithuania. Implementation of the recommendations of the EU programme LeaderSHIP 2015 is a key factor to develop Lithuanian shipbuilding and ship repair industries.

Main players:

The Western Shipyard Group is one of the largest corporations in Lithuania (1.900 employees), incorporating 23 companies. It specialises in shipbuilding, ship repair and conversion, port stevedoring and warehouse services, metal construction production, metal processing and hot galvanisation, technical supply and transport services.

Western Baltija Shipbuilding is a modern enterprise offering a full range of services from conceptual design to „turn-key". The company is a part of Western Shipyard, which belongs to the biggest Estonian corporation: the BLRT Group. The main direction of the Western Baltija Shipbuilding strategy is building „turn-key" vessels of different types: tugs, supply vessels, ferries, fishing trawlers, jack-up and transformer platforms for renewable energy and other special purposes.

Fish for human consumption

The number of Lithuanian fishing vessels decreased by around 35%, though total tonnage increased 1,5 times. A rapid rise in the income of the companies operating in the subsector between 2005 and 2008 (75%) was followed by a steep decline in 2009 largely due to the financial and economic crisis, but despite this decline the number of companies in the subsector kept growing. Between 2008 and 2009 employment figures in the subsector went down – from 6.700 to 6.300 employees, but the value added per employee remained largely unaffected.

Although fishing is one of the oldest elements of the marine industry in Lithuania, new fishing conditions (outside countries' economic borders, using automated trawlers which require minimum work force, etc.) generate the need for intellectual knowledge and innovation in shipbuilding for fishing, developing fishing and catch processing equipment, fish storage and transporting equipment and logistic chains, new fish production methods while preserving the quality of fish products. Therefore the Programme of Actions of the Lithuanian Fisheries Sector for 2007-2013 draws attention to the development of this MEA and its competitiveness, while ensuring the sustainability and recovery of fish stocks. To achieve these objectives, several activities are taking place to improve the management and organisation of this MEA, develop and strengthen industry associations, ensure equal competitive conditions for industry participants. The new European Maritime and Fisheries Fund (EMFF) will be the most important instrument to finance the reformed Common Fisheries Policy in 2014–2020 and to develop the EU's Integrated Maritime Policy.

Marine fishing boasts long traditions in Lithuania and is the largest among maritime MEAs in Lithuania in terms of number of persons employed and GVA generated by the sector. It is expected that this MEA will remain important in Lithuania because traditional fishing plays an important role in the overall development of the coastal areas by providing various job opportunities, while the fish processing sector – which is export oriented – will continue to contribute to the gross domestic product. This is largely supported by the availability of local fish raw material from the Baltic Sea, as well as the fact that fish processing sector has such strong players as Vichiunai Group, a producer of surimi-based products which is becoming one of the top producers in the world of a vast variety of analogue seafood products and has seven companies (production facilities) in Lithuania, Estonia, Spain and Russia. To this extent the fish processing industry plays an important role as a more prominent economic activity than fishing.

Main players

- Vichiunai Group, which employs about 3,5 thousand persons with a turnover of EUR 257 million (2008 data), is specialised in manufacturing of surimi-based products. The company has a portfolio of more than 3 thousand products, marked with VIČI, Esva, Columbus and other trademarks. In total the

Vichiunai Group produces annually over 120 thousand tons of food products, more than 85% of which are exported.

- The main fishing company with the greatest influence on the activities of Klaipėda port and the whole region, "Baltlanta" is the largest in the Baltic countries. Fleet: 10 fishing vessels and 3 transport reefers. The company exports its products to the EU and CIS countries.

Water projects

The function of Port Authority is to ensure the development of port capacity and competitiveness. In 2013 capital dredging of the entire Klaipeda port fairway up to -14.5 m is to be carried out (4,5 million m^3 of sediment to be dredged, with a cost of operations of EUR 37,5 million). Development of the Šventoji State Port (Second State seaport in Lithuania) infrastructure and deepening of the aquatorium is going to be implemented in the nearest future too. The overall investment plan for the period of 2013-2015 to develop different port infrastructure projects amounts to EUR 125 million (development of railway connections, etc.) and EUR 103 million for water projects. In light of the expected harbour dredging, reconstruction and repair of quays, Šventoji port infrastructure development and construction of the LNG terminal in Klaipeda port, passenger and cargo ferry terminal infrastructure development and storage of contaminated sediments, this sector is expected to grow.

Main players

- UAB Projektų centras and CJSC Projektu Centras, a subsidiary of the corporation Achema Group were established in 2001 in Kaunas. The main fields of activity of CJSC Projektu Centras include engineering and design, construction (general contracting), project management and construction technical supervision.
- The company Hidrosfera provides water supply, reconstruction and repair, dredging works and technical work projects carried out in project implementation and supervision of hydraulic structure design expertise.

Coastal tourism

The private sector has only begun to realise the economic benefits of tourism, yet support by private companies (hotels, restaurants, etc.) to fund cultural events, festivals and other tourist attracting events is not sufficient and there is a lack of public support in this area. Currently there are no well developed tourism products to make the Klaipeda port and the city of Klaipeda stand out from the competition and there is still a lack of marketing tools.

However, in a long-term tourism is seen as a new emerging opportunity for a sustainable development of the Klaipeda region based on the key strengths of the Curonian lagoon as an area with outstanding natural beauty. The coastal regions carry important cultural significance. The oldest busiest town is Palanga where the Baltic Amber way (route of 418 km along the Baltic coast) goes through connecting Latvia and the Kaliningrad region in Russia.

Another area for future development is medical tourism services. Modern SPA centres provide high quality beauty and medical treatments in Palanga and Neringa SPA centres.

The number of bed-places in different accommodation establishments in Klaipeda region has increased in 2011, thus reflecting the beginning of the recovery of the coastal industry in Lithuania after the crisis. These statistics indicate that coastal tourism in Lithuania has a potential for future growth but investments need to be made in tourism infrastructure and marketing.

The mild climate, natural landscape, abundant recreation resources and cultural heritage as well as the ethno-cultural identity of Lithuania provide favourable conditions for developing tourism and increasing employment and incomes. In order to create safe, stable and attractive coastal environments with clean water and healthy coastal habitats it is necessary to develop well-managed sustainable coastal tourism. Integrated Coastal Zone management is one available approach for achieving this aim.

Main players:

- National and regional parks administrations: Curonian Spit National Park, Seaside regional Park administrations
- Local communities
- Private business (restaurants, hotels, service companies)
- Tourism agencies Baltic Travel Service, Krantas Travel, Baltic Clipper, Holiday Link, Ecolines

3.3. Regulatory environment of the maritime economic activity

Lithuanian long term development strategy is the main document of long term planning in Lithuania, which reflects the objectives defined in Lisbon Strategy and provides guidelines for the economic, social, environmental protection and other policies of Lithuania. The document was adopted by the Resolution Nr. IX-1187 of Lithuanian Parliament (Seimas) in November 2002. Objectives of the Programme are related to the short shipping sector, the modernisation of transport routes, increases to the transit capacity of cargo transport via ports and thereby impacts to future ports development. It also seeks to influence recreational potential through better access and higher quality spaces, and influence nature conservation priorities.

List of the laws related to the maritime economic activities:

1. The Law of Trade Shipping of the Republic of Lithuania (2013)
2. The Law of Coastal Strip of the Republic of Lithuania (2002)
3. The Law of Fishery of the Republic of Lithuania (2000)
4. The Law of Tourism of the Republic of Lithuania (1998)
5. The Law of Klaipėda State Sea Port Of the Republic of Lithuania (1996)
6. The Law on Marine Environmental Protection (2010)
7. The Law of the Republic of Lithuania on Maritime Safety (2000; VIII-1897)

Short-sea shipping (incl. Ro-Ro)

Due to the unique structure of the shipping industry, the International Maritime Organisation (IMO) regulates shipping with measures applied to all ships. The EU implements a more stringent policy on marine environmental protection introducing specific requirements on the safety of ships and shipping, emissions from maritime transport and operation of ports (e.g. sulphur emission regulation).

The Law of the Republic of Lithuania On Merchant Shipping (1996, No. I-1513) regulates the transport of goods, passengers and luggage on marine ships, also using said ships for towage, salvage operations, and also in relation to technical survey of marine ships. According to the Law on Merchant Shipping (1996 No. I-1513[2]) a vessel can be registered on the Lithuanian Ships Register provided it is designed and built for navigation at sea, has the documents confirming this and provided it is owned by either a Lithuanian citizen or an enterprise registered in Lithuania.

The Law of the Republic of Lithuania on Maritime Safety (29 August 2000, No. VIII-1897, a new version by 15 February 2005 No. X-116) establishes maritime safety requirements for ships flying the state flag of Lithuania and foreign ships bound for the sea ports of the Republic of Lithuania. It also regulates state supervision and administration of maritime safety, rescue of persons and salvage of ships, investigation of marine casualties, wreck removal and liability for failure to meet maritime safety requirements.

Shipbuilding (excl. leisure boats) and ship repair

The development of the shipbuilding and repair sector at the EU level is formed by the EU initiative LeaderSHIP 2015, which has the objective to strengthen the already existing technological leadership in selected segments of the shipping market and to promote and protect innovation and experience. The goal is for EU shipbuilders and equipment suppliers to become world leaders in their fields by the year 2015. There is no special Law for this economic sector adopted at the moment in Lithuania.

[2] http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=453551

Fish for human consumption

The Fish for human consumption MEA is governed by the Fisheries Law of Republic of Lithuania (new amendment of the Law 20/06/2013 by Lithuanian Parliament, no.XII-397) which regulates the catch, utilisation, research, conservation, enhancement and monitoring of fish resources in inland waters, territorial marine waters and economic zone waters. It sets the basis for fisheries legislation and institutions responsible for fisheries management and control. The Programme of Actions of the Lithuanian Fisheries Sector For 2007-2013 draws attention to the development of this MEA and its competitiveness, while ensuring the sustainability and recovery of fish stocks (*Official Gazette*, 2008, No.132-5076).

Water projects

The Ministry of Transport and Communications and the State Enterprise Klaipėda State Seaport Authority pay particular attention to port infrastructure development. The Law of Klaipeda State Sea Port of the Republic of Lithuania (1996, No. I-1340[3]) states that port land, port waters and port infrastructure are operated by the right of trusteeship, managed by the Port Authority pursuant to the procedure and terms set by the Port Authority By-laws. The Klaipeda State Seaport Authority is responsible for constructing, using and developing port infrastructure, for maintaining designed depth in the port basin and at the berths and piers and for organising and carrying out port environment protection.

Coastal tourism

European Commission Communication on the New Political Framework for Tourism in Europe provides a new, coherent tourism strategy as a basis for the creation of the European "quality tourism" label, thereby increasing consumer confidence on tourism products. The tourism sector in Lithuania is governed by the Tourism Law No. XI-1496 of the Republic of Lithuania; new amendments were adopted by Lithuanian Parliament in 06/22/2011[4]. The main strategic document which regulates the development of tourism sector in Lithuania - the National Tourism Development Program 2007-2013 was adopted by Resolution Nr. 944 of the Lithuanian Government in 2007. The purpose of the program is to evaluate the development tendencies of the tourism sector, to define priorities, aims and goals of Lithuanian tourism development and to identify possible implementation measures.

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

Table 8 - Strengths and weaknesses analysis of most promising maritime economic activities

Short-sea shipping (incl. Ro-Ro)
(Benchmark instance: The Netherlands)

Today this MEA continues to play a crucial role in the EU as it relates to the all important intra-community trade moved by sea, which constitutes the largest part of all cargo moved. Short-sea shipping functions to further distribute from/to Europe the cargoes originating arriving from or heading to the rest of the world.

	Drivers for Growth		Barriers for Growth	
	from SWOT analysis	from Benchmark analysis	from SWOT analysis	from Benchmark analysis
Maritime research	Large investments to research infrastructure. The process of interaction between business and science has started.		Lack of specific knowledge in research centres. Lack of connection with Lithuanian research institutions in modern technology development. Lack of international cooperation in some	

[3] http://www.portofklaipeda.lt/regulations/level2/Uosto-istatymas/279
[4] http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=451902&p_query=%DEvejybos%20%20%E1statymas&p_tr2=0

			specific areas.	
Development and innovation	Inter-modality of the port. Large public and private investments		Lack of traditions of permanent cooperation with research institutions.	Strong competition from neighbouring countries and the Far East
Access to finance	Implementation of infrastructural projects using PPP (public private partnership) funding.	Availability of EU support and national public budget support.	Funds for the shipping and ports are not guaranteed. A lot of restrictions and limitations	
Smart infrastructure		Developed transportation infrastructure. Sufficiently developed port infrastructure	Depth in the port is smaller than that of competitors. Port territory is limited	
Maritime clusters	Several sectorial associations are working actively. New clustering initiatives (Klaipeda maritime cluster) can give good results		Not good enough representation of this sector's interests at the political level. Lack of cooperation between different associations representing the maritime business	
Education, needs in training and skills	Business companies organised training courses for their specific needs	Klaipeda university specific marine studies.	Klaipeda university can present new study programmes, but not so fast as business companies expect. Highly qualified specialists are leaving country to work in neighbouring countries.	
Maritime spatial planning	Coastal planning institute of Klaipeda University has most of the specialists needed.	Spatial plan is under preparation.	Lack of experience in spatial planning. Conflicting previous decisions and institutional plans.	
Integrated local development	EU Cohesion Policy. Status of the Klaipeda port as object of national importance.		Lack of tradition in integrated policies.	Reduced public funding
Public engagement	Public awareness of the sector's importance is progressing		Budgetary restrictions. Lack of a unified city-port strategy. Companies do not cooperate enough when influencing political decisions.	

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 research	Great investments to the research infrastructure will create better conditions for new technology development and implementation		Few research activities during last years.	
Development and innovation	Provision of higher value added products/services. Upgrading technologically complex ships		Drain of highly qualified specialists. Small share of world / European shipbuilding market.	
Access to finance			Limited access	
Smart infrastructure	New research ship	Favourable geographic location, ice-free port. Developed manufacturing capacity.		
Maritime clusters	International cooperation with Norwegian, Estonian and German partners			
Education, needs in training and skills	Developed specialised training base.	Developed specialised training base of qualified specialists (Klaipeda University, Klaipeda Ship repair and Building School, Klaipeda State College, Lithuanian Maritime		

		Academy). Experience building /upgrading technologically complex ships.		
Maritime spatial planning		New areas for business		
Integrated local development		Close relations with local development.		
Public engagement			Lack of promotion of sector's economic and social benefits. Development of the sector is not promoted on the state level.	

Fish for human consumption

(Benchmark instance: The Shetland Islands)

	Drivers for Growth		Barriers for Growth	
	from SWOT analysis	**from Benchmark analysis**	**from SWOT analysis**	**from Benchmark analysis**
Maritime research	Establishment of fisheries and aquaculture laboratory		Processing and sales: Lack of cooperation between research and business	
Development and innovation	Fish catching: Modernisation of fishing vessels creates opportunities to replace old engines by more economic and less polluting ones. Processing and sales: Development of high added value fish products.	Application of new technologies (closed recirculation systems)	Processing and sales: Limited potential to accept new challenges. Increasing competition in international markets. Fish catching: aging fishing fleet. Excess fishing capacity in the Baltic Sea coast.	Processing and sales: Need for innovation concerning fish storage and new fish production methods
Access to finance	Fostering fishers' positions in primary selling.		Limited access	
Smart infrastructure	Fish auction established, pier for small vessels built, further investments to suitable coastline fisheries infrastructure under the implementation.		Need for investment in fish storage, new fish production methods, technologies.	
Maritime clusters	Specialised association of fishermen's		Limited participation	No formally developed clusters
Education, needs in training and skills	Fish processing and sales: Historically developed experience working in international fish markets.	Fish catching: promotion for enterprises to stop commercial fisheries or develop recreational fisheries.	Large demand for new skills and competences in the fishery sector, lack of supply. Decreasing numbers of specialists and fishermen capable of working aboard fishing vessels. Large demand for new skills and competences in the fish processing sector.	
Maritime spatial planning		Sea basin master plan in preparation.	Fish catching: conflicts with other economic activities.	
Integrated local development	Fish catching: constant fisheries monitoring, restoration of fish resources and pisciculture in inland waters, Curonian Lagoon.	Programme of Actions of Lithuanian Fisheries Sector for 2007-2013. Aquaculture Development Strategy (2014-2020) is under preparation.	Slow development	
Public engagement	Fish processing and sales: actions to provide assistance for the co-operation of fisheries activity groups and producers (financed by		Fish catching: insufficient representation of fishermen's interests on national level. Fish processing and sales: low co-operation between	

	public funds)		producers and fisheries companies.	

Water projects

(Benchmark instance: Belgium)

	Drivers for Growth		Barriers for Growth	
	from SWOT analysis	from Benchmark analysis	from SWOT analysis	from Benchmark analysis
Maritime research			Lack of long-term cooperation with Lithuanian and other countries' research institutions for implementation and development of modern technologies.	
Development and innovation	Most of the water projects have been implemented in the last 5-7 years, using newest technologies.			
Access to finance	EU support for port infrastructure development	PPP (public-private partnership) project development. Private companies' investments are double the size of public ones.		Dependence on public funding (EU funds)
Smart infrastructure	Developed transportation infrastructure in the country. Klaipeda rail connection is being upgraded: there is the specialised rail connection Viking, connecting Klaipeda with Belarus and Ukraine and creating good conditions for waterworks development.	Continued development of efficiency and sustainability of infrastructure components		
Maritime clusters		.		Weak collaboration between companies
Education, needs in training and skills		Klaipeda university specific marine studies.		Lack of engineers, specific knowledge and experience
Maritime spatial planning	Marine part of master plan is going to be prepared at the end of 2013.		Lack of tradition in integrated policies.	
Integrated local development	The Port of Klaipeda has the status of an object of national importance.		Lack of unified city-port development strategy	
Public engagement	Public awareness of the sector's importance is progressing		Lack of a unified city-port strategy. Companies do not cooperate enough to influence political decisions.	Sometimes bad press coverage

Coastal tourism

(Benchmark instance: Sardinia)

In the last years regional development plans were adapted in order to drive the tourism industry to a more rational and diversified growth, by offering new types of tourism to reduce environmental impacts, optimising the utilisation of existing structures and creating new opportunities for development in secondary areas. Main challenges are: de-seasonalisation, diversification, segmentation, and sustainability.

	Drivers for Growth		Barriers for Growth	
	from SWOT analysis	from Benchmark analysis	from SWOT analysis	from Benchmark analysis
Maritime research	Local university activities		Ineffective coordination and planning	
Development and	In some cases (e.g. building of marina		Science/business cooperation is low. Intense	

innovation	infrastructure)		competition for tourist flows in the Baltic Sea Region. Short summer season in the Baltic Sea Region. Lack of national tourism products.	
Access to finance		Private sector investments to the service infrastructure, public/private – marinas, yacht ports.	Limited access	
Smart infrastructure	Potential of the cruise ship terminal			Lack of convenient piers, refuelling options, services.
Maritime clusters			Lack of interconnection	No maritime cluster linked to coastal tourism.
Education, needs in training and skills		Training of high quality tourism specialists in Klaipeda university and colleges		
Maritime spatial planning	Necessary environmental monitoring for implementation of ICZM is organised	In the process of development (BaltSeaPlan project)	There is no regular approach. Conflicts with other economic activities.	
Integrated local development		National and regional parks administrations, coordination of activities and protection of environment. Parks are areas protected by the state where cognitive tourism – sightseeing of natural and cultural valuables – is promoted. Human activity in the parks is limited, so as not to harm nature.		
Public engagement	International cooperation of scientists, local communities, service providers.		Ineffective coordination of marine tourism sector development on a national level	The large number of governing agencies and actors with competences in the coastal zone make the coordination difficult.

6. List of existing clusters

At the moment there are no officially registered marine related clusters in Lithuania. However, there are several initiatives and processes on-going to fill the gap. Several maritime business associations are working actively, with the most promising one being “Baltic valley”, which unites maritime business and science.

Maritime activities in Lithuania are concentrated around the city of Klaipeda, which has given name to the **Klaipeda Maritime Cluster**. It has a national scope, including the whole Lithuanian maritime sector, but the country’s small size and the geographical concentration of activities gives it a strong regional character. The main industrial focal points are shipping, shipbuilding and fishing.

In general, the Klaipeda Maritime Cluster has strong research capabilities in the marine environment, which is an area where the industry is rather weak. Conversely, the industrial activity is more pronounced in areas relating to maritime technology, where the research capabilities are on the weak end of the spectrum.

Within the Klaipeda Maritime Cluster, several organisations work with facilitating and stimulating cluster development, in order to increase its innovation capacity and promote economic development. The activities are mainly carried out as a part of the Marine Valley program, which has led to the establishment of the **Baltic Valley Association** and created increased collaboration among actors such as Klaipeda University, Klaipeda Science and Technology Park and various industry associations. In a sense, these organisations can be seen as a collective force that acts as a facilitator for cluster development.

In addition, there are several sectoral associations dealing with maritime activities:

- Association of Forwarders
- Association of Lithuanian Crewing Companies
- Association of Lithuanian Fish Product Producers

- Association of Lithuanian Ship Suppliers
- Association of Lithuanian Shipbrokers and Agents
- Association of Lithuanian Shipbuilders and Ship repairers
- Association of Lithuanian Ship-owners
- Association of Lithuanian Stevedoring Companies
- Lithuanian Seamen's Union

Table 9 - List and analysis of clusters

	Member State(s)	Maritime economic activities covered	Status (mature, growing, early development)	Strengths	Weaknesses
Klaipeda Maritime Cluster	LT	Shipbuilding and repair, shipping, fishing, marine environment research and technologies .	Early development	The port and its supporting infrastructure; the large infrastructure investments within the Marine Valley program for research.	Lack of coordination between regional marine sector actors and national level decision makers, strong mismatch between research capabilities and the demands of industry

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

Maritime Strategies

Most national policies do not cover maritime questions and are specifically focused on land activities. Lithuania is lacking a strategic approach document to set the long-term objectives for management of Lithuanian coasts and an action plan for their implementation. The policies are also insufficiently coordinated with regard to maritime issues e.g. transport/port development policy.

Despite the lack of an integrated national maritime policy/strategy and formal internal coordination structure for maritime affairs, for the last few years there has been a growing understanding in Lithuania that the future of water transport and success of different initiatives depends heavily on a comprehensive approach, which would integrate various actions. The Government of the Republic of Lithuania, acting in accordance with the principles of Blue Book on Integrated Maritime Policy in 2012 adopted resolution No. 1280[5] and established the framework of governance of national Integrated Maritime Policy of the Republic of Lithuania. By this it:

1. Identified the core activities carried out at sea (16 pillars).

2. Designated a leading ministry and participating ministries for each activity.

3. Designated the Ministry of Transport and Communication as the leading ministry (coordinator) for Integrated Maritime Policy of the Republic of Lithuania.

4. Established the Supervision Commission of the Integrated Maritime Policy of the Republic of Lithuania.

Land - sea integration is quite weak. A new version (still not approved) of the Masterplan of Klaipeda County is the first attempt to extend spatial planning offshore.

Short-sea shipping (incl. Ro-Ro) is supported by the **Lithuanian Long Term Development Strategy of the Lithuanian Transport System** and the **Klaipeda Region Development Plan**.

[5] http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=435595&p_tr2=2

Shipbuilding (excl. leisure boats) and ship repair is supported by the **Programme of Actions of Lithuanian Fisheries Sector**, **the Baltic Marine Environment Protection Strategy** and the **Klaipeda Region Development Plan**.

Fish for human consumption is supported by **Programme of Actions of Lithuanian Fisheries Sector for 2007-2013**, the **Long-term Transport System Development Strategy**, the **Baltic Marine Environment Protection Strategy** and the **Klaipeda Region Development Plan 2008-2013**.

Water projects is supported by the **Long-term Transport System Development Strategy** and the **Baltic Marine Environment Protection Strategy**.

Coastal tourism is supported by the **National Tourism Development Programme 2007-2013**, the **Programme of Actions of Lithuanian Fisheries Sector**, the **Lithuanian Long term Development Strategy of the Lithuanian Transport System** and the **Klaipeda Region Development Plan 2008-2013**.

Table 10 - Policies/interventions towards maritime economic activities, their objectives and links to the most relevant and promising maritime economic activities (see Table 11 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	Lithuanian Long term Development Strategy of the Lithuanian Transport system (until 2025)	Modernisation of transport infrastructure Development of system of protected areas Development and implementation of rational tourism policy Creation of infrastructure of marine and internal water tourism	Short-sea shipping (incl. Ro-Ro) Fish for human consumption Coastal tourism Water projects
National	Programme of Actions of Lithuanian Fisheries Sector for 2007-2013	Reducing the capacities of marine fishery fleet to foster the development of recreational fishery Development of a competitive fishery business in the Baltic Sea Modernisation of the marine fishery fleet Establishment of fishery infrastructure on the coast (new marinas with appropriate installations) Ensuring the concerns of fishermen when constructing Šventoji State Seaport	Shipbuilding (excl. leisure boats) and ship repair Fish for human consumptions Coastal tourism
National	Baltic Marine Environment Protection Strategy	Achieve and (or) maintain the good environmental state of Baltic Sea by the year 2020: To protect and preserve marine environment, not allow deterioration of its condition, and, if possible, restore areas of marine ecosystems, in which this environment is affected negatively. To prevent pollution access into the marine environment or to reduce it, which would guarantee, that marine biodiversity and ecosystems, human health or illegitimate exercise of marine environment would not effect harm or high-risk. Ensure that marine environment protection management is applied on the ecosystems-based approach. Reduce nutrient inputs into Baltic Sea. Seek that the concentration of hazardous chemical substances in the Baltic Sea does not induce pollution and negative changes to ecosystem. Achieve appropriate preservation level of Baltic Sea biodiversity. Execution of other economic activities in the Baltic Sea in a favourable way for the environment	Shipbuilding (excl. leisure boats) and ship repair Fish for human consumption Coastal tourism Water projects
National	National Tourism Development Programme 2007-2013	Promotion of inbound and domestic tourism; creation of favourable conditions for the development of active recreation, cultural and nature tourism; development of tourism infrastructure	Coastal tourism
Regional	Klaipeda Region Development Plan 2008-2013	To promote innovation, research and development of tourism region Increasing domestic and international economic competitiveness of the region by exploiting Klaipeda county geographical location and transport configurations	Shipbuilding (excl. Leisure boats) and ship repair Fish for human consumption

		To support enterprise development and competitiveness Promote recreational, tourism and cultural framework of sustainable development and the improvement of service quality Make rapid diversification of economic activity in rural areas and sustainable fisheries development	Short-sea shipping (incl. Ro-Ro)
			Coastal tourism

Table 11 – 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
Short-sea shipping (incl. Ro-Ro)	Maritime, coastal and cruise tourism
	Marine and mineral resources
Shipbuilding (excl. leisure boats) and ship repair	Marine and mineral resources
	Blue energy
Fish for human consumption	Aquaculture
	Maritime, coastal and cruise tourism
Water projects	Aquaculture
	Maritime, coastal and cruise tourism
Coastal tourism	Aquaculture
	Marine and mineral resources
	Blue technology

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

In September 2012 the „Review of Science, Studies and Innovations" was prepared by the Research and Higher Education Monitoring and Analysis Centre (MOSTA), on the basis of which in turn "A Contribution to Priority Setting for Future Research, Studies and Innovation in Lithuania" was developed. In terms of priorities for R&D and innovation development in Lithuania, six priority fields and sub-fields were identified as those where a breakthrough can be expected through the implementation of joint research and business projects. The sub-fields, listed below, will be further elaborated in future stages of the development of the Strategy for Smart Specialisation, by identifying specific priorities such as critical technologies, processes or products. The discussion process with business and science communities in those six areas was begun in September, 2013 and will be finalised in December, 2013.

In defining the priority fields, the group of experts took guidance from the Guide to Research and Innovation Strategies for Smart Specialisation. From the discussions with different social partners as well as science and business representatives, six priority fields and their sub-fields were elaborated. These are as follows:

1. Energy efficiency and sustainable environment
   - Planning of sustainable development of the energy sector
   - Efficient supply of energy
   - Efficient energy supply networks
   - Energy production and accumulation technologies and integrated solutions
   - Environmentally-friendly technologies
2. Health technologies and bio-pharmaceutics
   - Biotechnologies including cell and tissue technologies for medicine and pharmaceutics
   - Medical and pharmaceutical engineering
   - Public health technologies
   - Innovative e-solutions for medicine, e-resources and bio-banks
3. Food technologies and agro-innovation
   - Modern agricultural technologies for sustainable use of biological resources
   - Innovative and conventional food technologies
   - Foodstuffs storage and packaging technologies
4. New processes, materials and technologies for industry
   - New functional materials for industry
   - Flexible automated production processes
   - New product and process design technologies
   - New production technologies
5. Transport, logistics and e-systems
   - Development of transport infrastructure
   - Development and elaboration of sustainable transport systems
   - Smart logistic systems
   - Development and elaboration of efficient ICT
6. Inclusive and learning society
   - New result-oriented public service provision models
   - New methods, processes and technologies enabling self-directed learning and transition to a new learning paradigm, competitive advantages

The possible correlation of these priority areas with the most relevant and promising maritime economic activities is as follows:

Most relevant and promising MEAs	SSS Lithuania priorities (draft version)	Sub-fields (draft version)
Short-sea shipping (incl. Ro-Ro)	Transport, logistics and e-systems	Development of transport infrastructure Development and elaboration of sustainable transport systems Smart logistic systems Development and elaboration of efficient ICT
Shipbuilding (excl. leisure boats) and ship repair	New processes, materials and technologies for industry	New functional materials for industry Flexible automated production processes New product and process design technologies New production technologies
Fish for human consumption	Food technologies and agro-innovation	Modern agricultural technologies for sustainable use of biological resources Innovative and conventional food technologies Foodstuffs storage and packaging technologies
Water projects	Energy efficiency and sustainable environment	Planning of sustainable development of the energy sector Efficient supply of energy Efficient energy supply networks Energy production and accumulation technologies and integrated solutions Environmentally-friendly technologies
Coastal tourism	Health technologies and bio-pharmaceutics	Biotechnologies including cell and tissue technologies for medicine and pharmaceutics Medical and pharmaceutical engineering Public health technologies Innovative e-solutions for medicine, e-resources and bio-banks

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

CONTRACT NUMBER

MARE/2012/07 - REF. NO 1

COUNTRY FICHE ANNEX

LITHUANIA

DECEMBER 2013

EUNETMAR
European Networking Group for Integrated Maritime Policy

COGEA
Consulenti per la Gestione Aziendale

ANT International

azti tecnalia

Centro Tecnológico del Mar

Eurofish International Organisation

Poseidon Aquatic Resource Management Ltd

s.Pro sustainable projects

SINTEF

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

Function/maritime economic activity		GVA (EUR, billion)	Employment (*1000)	Score	Source &Reference year
0. Other sectors					
0.1	Shipbuilding (excl. leisure boats) and ship repair	0,068	3,483	2,082	Eurostat (2010)
0.2	Water projects	0,010	0,872	0,484	Eurostat (2010)
1. Maritime transport					
1.1	Deep-sea shipping	0,013	0,237	0,185	Eurostat (2010)
1.2	Short-sea shipping (incl. Ro-Ro)	0,039	0,699	0,545	Eurostat (2010)
1.3	Passenger ferry services	0,082	0,816	0,817	Eurostat: NACE 50.10 confidential Information enterprises (2011) Social security department (2012)
1.4	Inland waterway transport	0,003	0,143	0,087	Eurostat (2010): NACE 50.40 confidential
2. Food, nutrition, health and ecosystem services					
2.1	Fish for human consumption	0,098	7,84	4,41	Eurostat (2010) JRC Scientific and technical reports (2012): The 2012 Annual Economic Report on the EU Fishing Fleet Fishery Department of the Ministry of Agriculture (2013)
2.2	Fish for animal feeding	0	0	0	Eurostat (2010)
2.3	Marine aquaculture	0	0	0	Fishery Department of the Ministry of Agriculture (2013)
2.4	Blue biotechnology	N/A	N/A	N/A	
2.5	Agriculture on saline soils	0	0	0	The Saline and Sodic Soils Map, Joint Research Centre
3. Energy and raw materials					
3.1	Offshore oil and gas	0	0	0	Eurostat (2010)
3.2	Offshore wind	0	0	0	
3.3	Ocean renewable energy	0	0	0	European statistics EWEA (2013)
3.4	Carbon capture and storage	N/A	N/A	N/A	
3.5	Aggregates mining (sand, gravel, etc.)	0	0	0	
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	0,011	1,51	0,812	Eurostat (2010) Lithuanian Department of Statistics (2010)
4.2	Yachting and marinas	0,003	0,19	0,108	Eurostat (2010)
4.3	Cruise tourism	0	0	0	Eurostat: NACE 50.10 confidential Eurostat: Mar_pa_aa
5. Coastal protection					
5.1 – 5.2	Coastal protection	0,008	0,100	0,09	JSC “Šilutėspolderiai” annual report (2011) State Environment Protection Agency, 2010
5.3	Protection of habitats	0,012	0,054	0,087	Eurostat (2010), State service for protected areas (2012)
6. Maritime monitoring and surveillance					
6.1	Traceability and security of goods supply chains	0,002	0,120	0,07	Lithuanian Maritime Safety Administration (2010)
6.2	Prevent and protect against illegal movement of people and goods	0,006	0,464	0,261	State Board Security Department (2010)
6.3	Environmental monitoring	0,015	0,200	0,177	Eurostat (2010) State Environment Protection Department (2010)

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

Function/maritime economic activity		GVA (CAGR, %)	Employment (CAGR, %)	Score	Source &Reference year
0. Other sectors					
0.1	Shipbuilding (excl. leisure boats) and ship repair	-17,6%	-18,6%	-18,1%	Eurostat (2010)
0.2	Water projects	-39,7%	-18,0%	-28,8%	Eurostat (2010)
1. Maritime transport and shipbuilding					
1.1	Deep-sea shipping	-24,5%	-36,0%	-30,2%	Eurostat (2010)
1.2	Short-sea shipping (incl. Ro-Ro)	-32,5%	-42,8%	-37,6%	Eurostat (2010)
1.3	Passenger ferry services	N/A	N/A	N/A	Eurostat: NACE 50.10 confidential
1.4	Inland waterway transport	N/A	N/A	N/A	Eurostat (2010): NACE 50.40 confidential
2. Food, nutrition, health and ecosystem services					
2.1	Fish for human consumption	-10,71%	-8,88%	-9,79%	Eurostat (2010) JRC Scientific and technical reports (2012): The 2012 Annual Economic Report on the EU Fishing Fleet Fishery department of Ministry of Agriculture (2013)
2.2	Fish for animal feeding	N/A	N/A	N/A	Eurostat (2010)
2.3	Marine aquaculture	N/A	N/A	N/A	Fishery department of the Ministry of Agriculture (2013)
2.4	Blue biotechnology	N/A	N/A	N/A	
2.5	Agriculture on saline soils	N/A	N/A	N/A	The Saline and Sodic Soils Map, Joint Research Centre
3. Energy and raw materials					
3.1	Offshore oil and gas	N/A	N/A	N/A	Eurostat (2010)
3.2	Offshore wind	N/A	N/A	N/A	
3.3	Ocean renewable energy	N/A	N/A	N/A	European statistics EWEA (2013)
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	-21,5%	-18,1%	-19,8%	Eurostat (2010) Lithuanian Department of Statistics (2010)
4.2	Yachting and marinas	-6,7%	-3,3%	-5,0%	Eurostat (2010)
4.3	Cruise tourism	N/A	N/A	N/A	Eurostat: NACE 50.10 confidential Eurostat: Mar_pa_aa
5. Coastal protection					
5.1 – 5.2	Coastal protection	N/A	N/A	N/A	JSC "Šilutės polderiai" annual report (2011) State Environment Protection Agency, 2010
5.2	Preventing salt water intrusion	N/A	N/A	N/A	
5.3	Protection of habitats	-15,8%	0,0%	-7,9%	Eurostat (2010), State service for protected areas (2012)
6. Maritime monitoring and surveillance					
6.1	Traceability and security of goods supply chains	-10,8%	-1,5%	-6,1%	Lithuanian Maritime Safety Administration (2010)
6.2	Prevent and protect against illegal movement of people and goods	N/A	N/A	N/A	State Board Security Department (2010)
6.3	Environmental monitoring	16,9%	0,0%	8,5%	Eurostat (2010) State Environment Protection Department (2010)

3. 7 maritime economic activities with most future potential: indicator scores for activities

INDICATOR	DEFINITION / GUIDING QUESTIONS

Innovativeness	To what extend 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 extend 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 extend 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	+	+	++++
	0.2 Water projects	+	?	?	+	?	+	+++
1. Maritime transport	1.1 Deep-sea shipping	+	+	0	0	+	+	++
	1.2 Short-sea shipping (incl. Ro-Ro)	+	+	+	0	+	+	++++
	1.3 Passenger ferry services	0	0	+	+	0	+	0
	1.4 Inland waterway transport	0	0	0	+	0	+	0
2. Food, nutrition, health and ecosystem services	2.1 Fish for human consumption	+	+	0	+	0	+	++
	2.2 Fish for animal feeding	0	0	0	0	0	0	0
	2.3 Marine aquaculture	0	0	0	0	0	0	0
	2.4 Blue Biotechnology	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2.5 Agriculture on saline soils	0	0	0	0	0	0	0
3. Energy and raw materials	3.1 Offshore oil and gas	0	0	0	0	0	0	0
	3.2 Offshore wind	0	0	0	0	0	0	0
	3.3 Ocean renewable energy (wave, tidal, OTEC, thermal, biofuels, etc.)	0	0	0	0	0	0	0
	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	0	0	0	0	0	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)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4. Leisure, working and living	4.1 Coastal tourism	0	+	+	+	+	+	++++
	4.2 Yachting and marinas	+	+	0	0	+	+	++
	4.3 Cruise tourism	0	+	+	0	+	+	++
5. Coastal protection	5.1 Coastal protection	0	0	0	0	+	+	0
	5.3 Protection of habitats	?	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
European Union Strategy for the Baltic Sea Region (COM (2009) 248)	EU level	EC, EU countries	BSR development	Communication from the Commission, 2010	http://ec.europa.eu/regional_policy/sources/docoffic/official/communic/baltic/com_baltic_en.pdf
Reform of the Common Fisheries policy	EU level	EC, EU countries	Fishery	Green paper, 2009	http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0163:FIN:EN:PDF
LeaderSHIP 2015 – defining the future of the European shipbuilding and ship	EU level	EC, EU countries	Shipbuilding and ship	Communication from the	http://eur-lex.europa.eu/LexUriSer

repair industry – Competitiveness through Excellence"			repair	Commission, 2003	v/LexUriServ.do?uri=CELEX:52003DC0717:EN:NOT
Thematic Strategy on the Protection and Conservation of Marine Environment	EU level	EC, EU countries	Marine environment protection	Communication from the Commission, 2005	http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2005:0504:FIN:EN:PDF
European Parliament resolution on strategic goals and recommendations for the EU's maritime transport policy until 2018	EU level	EC, EU countries	Marine transport policy	European Parliament Resolution, 2010	http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:081E:0010:0016:EN:PDF
Strategy for the Baltic Sea Region Expected impact of the EU SBSR for the region: Lithuanian approach	National level	LT	BSR strategy Lithuanian approach	Lithuanian Seimas Resolution No. XI-665 of 2010-01-20	
Long-term Development Strategy of the Lithuanian Transport System (Until 2025)	National level	LT	Transport	The Government of the Republic of Lithuania Resolution, 2005	http://www.transp.lt/files/uploads//Strategy_EN.pdf (In English)
Programme of Actions of the Lithuanian Fisheries Sector For 2007 – 2013	National level	LT	Fishery	Government Resolution of the Republic of Lithuania, 2008	http://ec.europa.eu/fisheries/cfp/eff/op/list_of_operational_programmes/lithuania_lt.pdf (In Lithuanian)
Baltic Marine Environment Protection Strategy	National level	LT	Marine Environment Protection	Government Resolution of the Republic of Lithuania, 2010	http://www.helcom.fi/stc/files/BSAP/LT_NIP.pdf (In English)
Klaipeda Region Development Plan 2008-2013	Regional level	LT	Sustainable development	Ministry of Interior, 2007	http://www.vrm.lt/nrp/assets/files/klaipeda/Tarybos%20sprendimai/2011-12%20sprendimai/20111214_513S-66_priedas.pdf (In Lithuanian)
National Tourism Development Programme 2007-2013	National level	LT	Tourism development	Government Resolution of the Republic of Lithuania, 2007	http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=378765 (In Lithuanian)