



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



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0. General overview

Montenegro is one statistical region at all three levels (NUTS1, NUTS2, NUTS3)¹. On the other hand, Montenegro uses a system of Local Administrative Units including twenty-one Municipality which can be partially used to distinguish some characteristics of coastal areas. As defined by the Montenegrin Regional Development Law, 3 regions are defined for statistical and analytical purposes. The Coastal Region (Primorski region) consists of the 6 municipalities with access to Adriatic Sea. Such defined coastal region has an area of approximately 1.591 km², which is 11,5% of the country.

Morphological structure of the coastline

- Coastline is 293 km long (FAO data²).

Population and related social condition for maritime areas

- Total population of Montenegro consisted approximately of 619.700 inhabitants in 2012, of which 24% (148.600) living in the coastal region (MONSTAT).
- Main cities of the coastal region are Herceg Novi (approximately 20.000 inhabitants) and Bar (18.000) (MONSTAT).
- Employment rate was 40,0% in Montenegro in 2012; 44,8% in the coastal region (MONSTAT).
- Unemployment rate was 19,6% in Montenegro in 2012; 10,8% in the coastal region (MONSTAT).

Economic role of maritime areas over the national total

- Gross Domestic Product (GDP) of Montenegro was EUR 3.234 million in 2011, with a real growth rate of 3,2% (MONSTAT).
- Contribution of tourism to GDP is at the level of 15% (and growing), with the predominant share of tourism in the coastal area.
- GDP per capita was EUR 5.211 (MONSTAT).
- Per capita GDP in coastal region is around EUR 3.600 (Coastal Area Management Programme Montenegro Feasibility Study)
- Gross Value Added was EUR 2684 million in 2011, with the contribution of the following activities:

Table 1 - GVA – Details by NACE activities of the Montenegro (2011)

Sector (NACE)	GVA (million EUR)
Agriculture, forestry and fishing (NACE rev. 2 "A")	266
Manufacturing (NACE rev. 2 "C")	160
Construction (NACE rev. 2 "F")	176
Wholesale and retail trade; transport; accommodation and food service activities; information and communication (NACE rev. 2 "G-J")	884
Total (all NACE)	2684

- Persons in employment in Montenegro were 201.600 in 2011, with the contribution of the following activities:

¹ This aggregation, accepted by EUROSTAT, was proposed by the Statistical Office of Montenegro (MONSTAT) in 2010, on the base of small population.

² Plan Bleu. 2011. Analysis of economic activities in the Mediterranean: Fishery and aquaculture sectors.

Table 2 - Employment – Details by NACE activities of Montenegro (2011)

Sector (NACE)	Employment (1000)
Agriculture, Aquaculture and Fishing (NACE rev. 2 "A")	11.400
Manufacturing (NACE rev. 2 "C")	14.400
Construction (F)	12.300
Wholesale and retail trade; transport; accommodation and food service activities; information and communication (NACE rev. 2 "G-J")	82.400
Total (all NACE)	201.600

- In the coastal region 55.100 persons are in employment (27% of the country), of which 2% in the agriculture, 15% in the industry and 83% in the services, being the region most oriented towards services (MONSTAT).
- With regard to the structure of employment in the coastal region 30,7% and 15,6% are employed in wholesale and retail sale, respectively, and in 15,1 % in education. Some 2.319 people (7,5%) are employed in hotels and restaurants and 13,8% in transportation. The share of employment in the private sector in the coastal region accounted for 34,3% of total employment in this sector in Montenegro.

1. Marine and maritime activities

Table 3 – Indicators of relevant marine and maritime activities in Montenegro

Function/activity	GVA (EUR, billion)	Employment (*1000)	Number of enterprises	Further indicators	Source & Reference year	
0. Other sectors						
0.1	Shipbuilding and ship repair	n.a.	n.a.	55	----	Ministry of finance, (2012)
0.2	Water projects	n.a.	n.a.	37	----	Ministry of finance . (2012)
1. Maritime transport						
1.1	Deep-sea shipping	0	0	0	No deep-sea shipping is realized by national enterprises	----
1.2	Short-sea shipping (incl. Ro-Ro)	0,0041	0,2	2 (shipping only)	Tonnes transported: 1.227.877 in 2012. Passengers carried: 69.436 in 2011.	MONSTAT, (2011) Ministry of Transport and Maritime Affairs Montenegro
1.3	Passenger ferry services			109 (shipping only)		
1.4	Inland waterway transport	0	0	1	----	----
2. Food, nutrition, health and eco-system services						
2.1	Fishing for human consumption	0,016 GDP	0,282	122 enterprises in fishery; 10 fish processing enterprises; 54 wholesale enterprises and 6 retail enterprises	546 tonnes of caught fish (2011); 445 000 EUR (2012)of sold prepared or preserved fish	Ministry of finance. European Commission Study- not adopted- Country report, 2011. MONSTAT (2012)
2.2	Fishing for animal feeding	0	0	0	----	----
2.3	Marine aquaculture	n.a.	0,04	2 marine fish farms and 16 mussel farms	Mussel farming — total yearly production 250 t; Marine fish farming- total yearly production 100 t	Ministry of Agriculture and Rural Development (2010)
2.4	Blue biotechnology	0	0	0	0	----
2.5	Agriculture on saline soils	0	0	0	0	----
3. Energy and raw materials						
3.1	Offshore oil and gas	0	0	0	----	----
3.2	Offshore wind	0	0	0	----	----
3.3	Ocean renewable energy	0	0	0	----	----
3.4	Carbon capture and storage	0	0	0	----	----
3.5	Aggregates mining (sand, gravel, etc.)	0	0	0	----	----
3.6	Marine minerals mining	0	0	0	----	----
3.7	Securing fresh water supply (desalination)	0	0	0	----	----
4. Leisure, working and living						
4.1	Coastal tourism	2,47	16,67* (*hotels and restaurants in general)	696 Hotels and other accommodation and camping	16,7% GDP due to tourism sector. Tourist arrivals: 1.262.985 (2010); Overnight stays: 7.964.893 (2010)	MONSTAT (2009)
4.2	Yachting and marinas	----	----	1	Number of vessels and persons arrived: vessels: 2.987 (2012); persons: 14.494 (2012). 8 registered yachts as Montenegrin property	MONSTAT (2012) Ministry of Transport and Maritime Affairs Montenegro.
4.3	Cruise tourism	----	----	----	Number of cruises: 348 in 2012. Number of passengers: 244.084 in 2012.	MONSTAT (2012)
5. Coastal protection						
5.1	Protection against flooding and erosion	n.a.	n.a.	----	----	----
5.2	Preventing salt water intrusion	n.a.	n.a.	----	----	----
5.3	Protection of habitats	n.a.	n.a.	----	----	----
6. Maritime monitoring and surveillance						
6.1	Traceability and security of goods supply chains	n.a.	n.a.	----	----	----
6.2	Prevent and protect against illegal movement of people and goods	n.a.	n.a.	----	----	----
6.3	Environmental monitoring	n.a.	n.a.	----	----	----

Table 4 - Overview of relevant marine and maritime activities in Montenegro

Function/activity		Activity overview	Socio economic indicators	Source & Reference year
0. Other sectors				
0.1	Shipbuilding and ship repair	Most of enterprises (46) are registered as ship repair	The only shipbuilding company that used to build ships up to seventies now mainly occupies about repairing of boats and hires 518 employees and in 2011; it had a revenue of EUR 16,5 million, while in 2012 decreased down to EUR 13 million. Building of leisure boats is not developed.	Ministry of Transports and Maritime, 2012. Shipyard Bijela company report (2012)
0.2	Water projects	1 major port (Bar) that is able to handle about 5 millions of cargo, other 3 ports are smaller, mainly used for smaller ferries, yachts and boats	Authorities are intentioned to build further marinas, in order to meet the increasing demand of yachting tourism	Ministry of Transports and Maritime (2012)
1. Maritime transport				
1.1	Deep-sea shipping	During the nineties the deep sea shipping companies that occupied about transport of goods <i>Prekookeanska plovidba</i> and <i>Jugoceanija</i> , shut due to international community sanctions that prevented Montenegrin ships, at that time still with Yugoslavian flag, to sail into world ports and do the transport of goods.	No deep-sea shipping is realized by national enterprises	Ministry of Transports and Maritime (2012)
1.2	Short-sea shipping (incl. Ro-Ro)	The 2 companies are working with losses, but still they are programming to enlarge their number of ships by taking loans in order to enlarge their offer.	"Crnogorska plovidba A.D. Kotor" is a 100% state-owned stock company. Transported goods decreased by 6% yearly in the last period (from 2009 to 2012)	Ministry of Transports and Maritime (2012)
1.3	Passenger ferry services	Only one mayor company offers ferry service and connects Bar with Bari and Ancona. BARSKA PLOVIDBA AD is a joint stock company with the objective of performing the maritime traffic, the marina activities, international freight forwarding, maritime agency, and catering businesses.	In the ferry service, transported people decreased by 12% yearly from 2008 to 2010. Many other small enterprises work with tourists as "taxi boats".	Ministry of Transports and Maritime (2012)
1.4	Inland waterway transport	Montenegro doesn't have inland waterway transport where could be done public transport of people and goods		
2. Food, nutrition, health and eco-system services				
2.1	Fishing for human consumption	Commercial and small-scale fisheries coexist. The commercial fleet can be characterized as old and inefficient. The national fishing fleet is rather limited (22 vessels of which 19 trawlers in the year 2008). Other fishing activities are performed by small-scale gears in the littoral part of the sea. There is inadequate support infrastructure for the commercial vessels and this increases costs while reducing competitiveness. Off season there is limited demand for the product and this reduces the potential to improve earnings.	Total value of fisheries sector is around EUR 15 million. Fisheries sector share in gross national product is 0,5%. It is considered strategic to build to specialized fishing ports as landing and first sale place. The implementation of new fisheries management plans, supported by rigorous scientific analysis, will reduce the risk of over exploitation of marine fisheries and provides a stronger basis for new investment in the sector.	Ministry of Agriculture and Rural Development Montenegro Progress Report (2012) Interviews with ministerial experts
2.2	Fishing for animal feeding	Not existing in Montenegro	Not existing in Montenegro	----
2.3	Marine aquaculture	Mariculture activities are currently carried out exclusively in the Bay of Kotor (87 km ²), which is sheltered and suitable space primarily for the cage fish farming and bivalve farming on floating plantations.	Production of both finfish and shellfish is increasing the last years, but productivity is still considered to be low. It is estimated that the mariculture sector in Montenegro employs about 40 people.	Interviews with ministerial experts
2.4	Blue biotechnology	Not existing in Montenegro	Not existing in Montenegro	----
2.5	Agriculture on saline soils	Not existing in Montenegro	Not existing in Montenegro	----
3. Energy and raw materials				
3.1	Offshore oil and gas	Previous studies of oil and gas of Montenegro's offshore indicate	Not existing in Montenegro	Strategy of energy

Function/activity		Activity overview	Socio economic indicators	Source & Reference year
		prosperity of this area. Existence of basic pre conditions for production of oil and gas in subsoil of south geological Adriatic basin is proved and a direct confirmation of this fact is a production in Italian and Croatian part of the basin. Development depends on further results of researches (that will be conducted in next 5 -10 years): if positive, Montenegro could count on the possibility to exploit its oil and natural gas. Then, technical conditions, economy and dynamics of exploitation will be clear, but even in most favorable conditions this can't be expected before 2020.		development of Montenegro up to 2030, Ministry of economy
3.2	Offshore wind	Montenegro is still not using offshore wind as a source of energy. Researches and estimates of offshore wind energy are still in progress.	Not existing in Montenegro	Strategy of energy development of Montenegro up to 2030, Ministry of economy
3.3	Ocean renewable energy	In strategies of energy development of Montenegro there are intentions to increase use of renewable energies like wave energy, tidal energy, biomass etc.	Not existing in Montenegro	Strategy of energy development of Montenegro up to 2030, Ministry of economy
3.4	Carbon capture and storage	Not existing in Montenegro	----	----
3.5	Aggregates mining (sand, gravel, etc.)	Not existing in Montenegro	----	----
3.6	Marine minerals mining	Not existing in Montenegro	----	----
3.7	Securing fresh water supply (desalination)	Not existing in Montenegro	----	----
4. Leisure, working and living				
4.1	Coastal tourism	With its many bathing resorts and picturesque bays, the coastal stretch from Budva-Jaz to Bar makes up the backbone of the Montenegrin tourism sector. Traditionally, approx. 50% of all registered overnight stays are recorded here. Arrivals are very concentrated in summer months	Tourist arrivals increased by 3% yearly from 2008 to 2012. As stated in WTTC forecasts and according to data showing a direct contribution of travel and tourism to GDP, Montenegro will have one of the strongest growth rate in the world the next years.	MONSTAT (2012)
4.2	Yachting and marinas	Yachting tourism in Montenegro is in growing fast according to number of vessels and tourist arrivals. Four marinas and the luxury nautical and tourist center of Porto Montenegro in Tivat already secured an enviable position on the map of interesting destinations for boaters	4 main ports and 1 marina are currently used. Arrival increased by 6% yearly from 2010 to 2012. Differently from coastal tourism, where most of the arrivals are from Eastern-Europe countries, marinas attract people from Western-Europe countries. Arrivals are very concentrated in summer months	MONSTAT (2012). Ministry of Transport and Maritime Affairs Montenegro.
4.3	Cruise tourism	There are no local enterprises that cruise ships and all cruise tourism is based on foreign cruise enterprises. In 2012, foreign vessels realised 348 cruises in Montenegro. Total of 244.084 passengers arrived during these cruises. Of economic relevance for the destinations are port fees, the costs for the excursion organization, expenditure for minor consumption and souvenirs, the tax on these and all other associated services.	Based on cruise passenger number, cruise tourism has grown at very rapid rates in the last years (+30% from 2011 to 2012). However it is unclear the real impact on Montenegro economy, since cruise enterprises are foreign. Advantageous is the promotional effect the cruise ship has for the region.	
5. Coastal protection				
5.1	Protection against flooding and erosion	"Public Enterprise for Coastal Zone" deals with protection of coasts but does not consider it as a priority	n.a.	----
5.2	Preventing salt water intrusion	This activity is not developed	n.a.	----

Function/activity		Activity overview	Socio economic indicators	Source & Reference year
5.3	Protection of habitats	The Public Enterprise for National Parks of Montenegro (PENP) is responsible for protection and management of the four Montenegrin National Parks: Durmitor, Biogradska gora, Lovcen and Skadarsko jezero. All these parks are located inland. Minor protected areas are located along the coast.	n.a.	----
6. Maritime monitoring and surveillance				
6.1	Traceability and security of goods supply chains	----	----	----
6.2	Prevent and protect against illegal movement of people and goods	Maritime Police now owns a system of electronic monitoring of the Adriatic sea, which further provides real-time situational awareness. There are difficulties in reaction because of the configuration of the territory and waters and also because of the old equipment. There are no funds to adapt equipment and reconstruct facilities. Police of Montenegro occupies about custom services and coastguards (marine navy) about emergencies and illegal movement of people and goods. It has been planned a new maritime border crossing - Port Montenegro in Tivat that facilitates the work of Maritime Police.	n.a.	The Maritime Police of Montenegro. (2010) Report on the performance of the tasks of border control and condition of material - technical equipment of the Border Police
6.3	Environmental monitoring	There is still no unique law in Montenegro about protection of marine water so there are problems regarding monitoring of this ecosystem and also its protection. Agency for protection of habitat of Montenegro is monitoring the quality of marine water and pollution.	n.a.	Agency for protection of habitats of Montenegro

2. Breakdown of marine and maritime activities at regional level (NUTS 2) and selection of most relevant regions

Montenegro will no further be split up into regions, considering that MONSTAT and EUROSTAT agreed to consider Montenegro as one statistical region in all three levels (NUTS1, NUTS2, NUTS3).

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

The following sections are developed in line with the methodology of the Blue Growth study, as requested by DG MARE. A list in ranking order of the 7 largest, 7 fastest growing and 7 prospective marine and maritime activities with most future potential at NUTS 0 level will be provided.

3.1 Ranking order of the 7 largest marine and maritime activities

Since the data on GVA and employment are generally not available, ranking order of 7 largest maritime economic activities is based mainly upon the number of enterprises, official documents and interviews with policy makers.

Table 5 - Ranking order of the 7 largest marine and maritime activities in Montenegro

Rank	Activity	Number of enterprises	GVA (million EUR)	Employment (*1000)	Score
1	Coastal tourism	696	2,47	16,67 (hotels and restaurants in general)	-
2	Shipbuilding and ship repair	55	-	-	-
3	Passenger ferry services	109	-	-	-
4	Fishing for human consumption	54	-	-	-
5	Water projects	37	-	-	-
6	Short-sea shipping (incl. Ro-Ro)	2	-	-	-

Coastal Tourism

Coastal tourism, as one of the activities that contributes to 15% of the GDP of Montenegro makes it one of the largest maritime activities in Montenegro. Not only for the contribution to the total GDP but also because it employs 27% of people of the country. The entire coastal area is developed in order to offer tourist services and is still in phase of development. Intensive construction in the last few decades were primarily residential and commercial for tourism and thanks to tourism.

Shipbuilding and ship repair

A giant ship repair yard Bijela that is already positioned on the world market and is one of the main exporters of Montenegro puts the ship repair activity on the third place next to a large number of small ship repair enterprises. Building of leisure boats is not developed.

Passenger ferry services

The activity "Passenger ferry services" on the local level is very developed. Mostly when it's about offering small cruises along the coast and transporting tourists to the near islands. The high number of enterprises registered for this activity is the reason for putting this passenger ferry services at the second place for the 7 largest activities in Montenegro.

Fishing for human consumption

The use of fish resources in Montenegro is now more intensive, mostly based on trawlers, seines and sometimes night lines. There are 54 companies registered for this activity. The current level of sea fish exploitation is about 300 tonnes, of which 280 tonnes is caught by trawler fishing and some 20 tonnes by fishermen. Besides the fishing companies there are many fishing cooperatives in the coastal area and there are also 3 fish processing plants.

Water projects

Water projects are developed in the coastal area thanks to a developed swimming tourism that requires constant activities on developing marinas, promenades near the beaches, construction and development of the swimming beaches, water waste management and repair of the coasts near the towns and beaches. The Government of Montenegro has announced several more water projects and together with Ministry of Tourism and Public Company for Montenegrin Coastal Zone Management is supporting these activities.

Short-sea shipping (incl. Ro-Ro)

After the period of economic devastation short sea shipping in Montenegro is slowly recovering. At the present moment there are 2 registered big companies that are executing cargo transport out of the territorial waters of Montenegro. The most important activities of the companies are related to the management of constructions, taking over of the ships and the commercial exploitation of ships. Ships were rented during the whole year which shows that this activity is securing solvency to the company.

3.2 Ranking order of the 7 fastest growing marine and maritime activities

Since data on GVA and employment are generally not available, estimations are based on other indicators to evaluate the growth of activities. These indicators are specified in the table below:

Table 6 - Ranking order of the 7 fastest growing marine and maritime activities in Montenegro

Rank	Marine and maritime activities	GVA (CAGR)	Employment (CAGR)	Score
1	Cruise tourism	n.a.	n.a.	30,41
2	Yachting and marinas	n.a.	n.a.	6,09
3	Coastal tourism	n.a.	n.a.	3,10
4	Marine aquaculture	n.a.	n.a.	0,01
5	Fishing for human consumption	n.a.	n.a.	-3,31
6	Short-sea shipping (incl. Ro-Ro)	n.a.	n.a.	-6,06
7	Passenger ferry services	n.a.	n.a.	-11,95

The activities were ranked mainly using the MONSTAT figures on tourist arrivals and passengers for Cruise tourism, Coastal tourism and Passenger ferry services. Other activities were ranked following other indicators such as production of Marine Aquatic Products for Marine aquaculture or transported goods for Short Sea Shipping, but since the indicators were not equal also trends and potentials of the activities were taken into consideration.

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

The choice of the activities with most future potential has been mainly based considering, besides the potential growth rates (conditioned by the international economic trends), the current economic relevance of every activity, which has a clear validation in the policy relevance that rises in national strategies of economic development. Actually, it is clear that Montenegro is mainly focused to further develop the touristic sector (including yachting and marinas), which is by large the key sector of coastal economy. Most of the other activities may be seen as collateral activities, and those which are more related to tourism are

also those that can develop faster, due to the economic interest of investors and the political interest of the country.

Between these activities there is the construction of water projects that includes new marinas for yachts but also promenades. Yachting needs also ship yards that are clearly focused on ship repair rather than ship building. Passenger ferry services are an important means of transportation for tourists coming from Italy; furthermore between the enterprises that transport people there is a large number of taxi boats who move people to touristic islands, or for other leisure routes.

Marine aquaculture can take advantage from seasonal demand in coastal centres. On the other hand, considering the overexploited state of many Adriatic stocks (not caused by Montenegrin fleets) it is difficult to imagine a significant growth of fisheries, while for aquaculture there are more possibilities of expansion.

Finally, short-sea shipping should take advantage of the next development of the Pan-European transport corridors, with the port of Bar representing a natural connection between eastern Europe and Bari, in Italy.

Table 7 - Ranking order of the 7 marine and maritime activities with most future potential in Montenegro

Rank	Marine and maritime activities	Score
1	Coastal tourism	+++++
2	Water projects	+++++
3	Yachting and marinas	+++++
4	Passenger ferry services	++++
5	Shipbuilding and ship repair	+++
6	Short-sea shipping (incl. Ro-Ro)	+++
7	Marine aquaculture	++

Coastal tourism

- **Innovativeness:** This sector is not yet developed to its full potentials and there are still no significant innovations in the offer of touristic services. Being mainly based on swimming and bathing tourism it needs an expansion of other types of tourism that will give more value to natural resources that Montenegro owns. **Score assigned: 0**
- **Competitiveness:** Over the last decade Coastal Tourism in Montenegro had a significant growth. International arrivals have grown from 100,000 in 2000 up to 1,1 million in 2010. Total earnings also have risen rapidly. According to the Travel & Tourism Competitiveness published by the World Economic Forum from 2008 up to 2011 Montenegro improved its overall competitiveness ranking as a tourist country rising from the 49th position in 2009 up to 36th in 2011. There is a whole new range of tourist facilities and attractions waiting to be developed. "The WTTC/Oxford Economics research findings suggest that over the next ten years Montenegro will enjoy annual growth in visitor exports of around 9.4% - more than double the world average of 4.3 % and nearly three times the regional average of 3.5%. **Score assigned: +**
- **Employment:** Now the coastal tourism is the sector hiring the most Montenegrin population and with the growth of the sector also the number of work positions is expected to be bigger. **Score assigned: +**
- **Policy relevance:** Many strategies have been developed, since the coastal tourism is one of the main contributors of development and earnings for Montenegrin government is of great importance. **Score assigned +**
- **Spill-over effects:** Coastal tourism affects positively a whole range of tertiary services and is influencing a development of cruise tourism especially in the zones of Boka Kotorska and Budva. As statistic figures show the coastal area is the main draw for visitors to Montenegro. The most important destination is town of Budva which sees more than 40% of all visitors to the country. The south part of the coast, south of Bar is not yet developed to its full potential. But it includes Velika

Plaza – 13 kilometers of white sand beach which has been marked as a major area for upmarket investment and development over the next ten years. **Score assigned +**

- **Sustainability:** One of the commitments of the Government of Montenegro is to ensure sustainable development of coastal tourism which is already a vital economic sector and one of the goals to reach in order to make Montenegro high – yield tourism destination. **Score assigned +**

Water projects

- **Innovativeness:** The coastal tourism in Montenegro is affecting positively the Governments engagement and interest in water projects which is mainly realized through the improvement of the look of the coastal zone. The innovativeness is expected in construction of receiving facilities, bathing zones and marinas since the expansion of cruise and yachting tourism is noted. Also Montenegro is actively taking part in projects that have as a main goal the development of mechanisms and the capacity for realise an integrated planning of the coastal zones and the implementation of new instruments of spatial planning – planning of sea purpose in the Region of Baltic, Adriatic and Black Sea. **Score assigned: +**
- **Competitiveness:** Geographical position, lower prices of marine services than in neighbouring countries are already attracting more and more foreigner tourists **Score assigned: +**
- **Employment:** The Government has announced several more projects for marina development along the coast and this allow us foreseen a need for new human resources, but still these projects are not yet initiated which led us to uncertainty about the future growth of employment. **Score assigned: 0**
- **Policy relevance:** The Government of Montenegro founded a Public company for coastal zone management « Morsko Dobro » that deals with protection and promotion of use of the coastal zone, Coastal Zone Management, conclusion of the contracts for use of the coastal zone, construction and maintenance of infrastructure facilities for the coastal zone and this fact is proving that the management of water projects is important to Republic of Montenegro. **Score assigned: +**
- **Spill-over effects:** Positive spill over-effects are expected in all economic sectors that will give services to future marinas. **Score assigned: +**
- **Sustainability:** Public coastal zone management company gained its sustainability according to its work and engagement so for the future this is expected to continue. **Score assigned: +**

Yachting and marinas

- **Innovativeness:** in order to develop nautical activities, Government of Montenegro suggested to design and equip the existing nautical places and the construction of new modern equipped marinas that would compete to the similar ones in the Mediterranean. **Score assigned: +**
- **Competitiveness:** Cruise and yachting in Montenegro is in stage of expansion. The Port of Montenegro, since its opening in 2009 is attracting large and small cruise ships, mega yachts and smaller sailing and power boats from all around Europe. New marinas are also being developed in other parts of the coast, such as Bar. All these new ports let one envisage that Montenegro is becoming competitive and will be even more. **Score assigned: +**
- **Employment:** Development of ports and the increase of need for services will reflect positively on employment. **Score assigned: +**
- **Policy relevance:** Since nautical tourism is one of the most favoured selective types of tourism, one of the goals of Montenegrin Government and Public Company for Montenegrin Coastal Zone Management is to develop this kind of tourism. **Score assigned: +**
- **Spill-over effects:** Positive spill-over effects are already noted and also expected on nautical tourism and other activities concerning marina services. Increasing demand for yachting and power boat facilities can be expected. **Score assigned +**

- **Sustainability:** this sector needs still to be developed, so its sustainability is still insecure. **Score assigned: 0**

Passenger ferry services

- **Innovativeness:** Decreasing number of passengers doesn't give the opportunity to Montenegrin ferry companies to invest in innovation of this sector, therefore in the near future significant changes are not expected. **Score assigned: 0**
- **Competitiveness:** Having just two international lines and given the competition of neighbouring countries also offering passenger ferry services for same price, Montenegro cannot be competitive. Also the lack of highways which would connect Montenegro with other capital cities engender problems in reaching great number of passengers and therefore threaten the competitiveness. **Score assigned: 0**
- **Employment:** During summer season there is a need for "taxi boats" giving opportunity for seasonal employment. Also the ferry company "Barska plovdba" every year hires seasonal seamen and expected development of tourist movement should have a positive effect on employment in passenger ferry services. **Score assigned: +**
- **Policy relevance:** There is a good collaboration between Government, Ministry of Maritime Affairs and company "Barska plovdba". The latter is willing to continue this collaboration in order to improve its activities through Government and Ministry of Maritime Affairs' incentives. **Score assigned: +**
- **Spill-over effects:** Expected spill-over effect is a dynamic economic development of Montenegro through more frequent transport of passengers to Italy (corridor Belgrade-Bar-Bari) by using ferry lines of "Barska plovdba". **Score assigned: +**
- **Sustainability:** Even though the passenger ferry services companies suffered from the decrease of passengers and higher maintenance costs, the sector managed to remain sustainable and this is probable to continue in the future. **Score assigned: +**

Shipbuilding and ship repair

- **Innovativeness:** Even though in the "Shipyards Bijela" are opened to innovations, it will not be possible to introduce them due to the fact that the company is suffering effects of global crisis. **Score assigned: 0**
- **Competitiveness:** Geographical position, new exclusive marina situated next to shipyard Bijela, quality of work, long tradition and good prices make ship repair in Montenegro a competitive sector. **Score assigned: +**
- **Employment:** the reduction of business and global crisis make the situation of the employment really difficult and growth of employment is not expected soon. **Score assigned: 0**
- **Policy relevance:** One of development goals of Montenegro Government is planning incentives for the development of production of the Shipyards Bijela along with efforts to find foreign investments according to a Development Strategy. After that, the privatization of the above mentioned company is foreseen. **Score assigned: +**
- **Spill-over effects:** Development of ship repair in Bijela is likely to have a positive spill-over effect on local economy. **Score assigned: +**
- **Sustainability:** Shipbuilding and ship repair sector needs more incentives and governments aids in order to achieve its sustainability. **Score assigned: 0**

Short-sea shipping (incl. Ro-Ro)

- **Innovativeness:** There are plans for renewal of terminals and construction of new ones at the Port of Bar, but not all the present potentials that this port offers are used, also enlargement of cargo

fleet is one of the goals to achieve, but all of them does not give the idea that investments in innovation of this sector will be possible soon. **Score assigned: 0**

- **Competitiveness:** Montenegro needs to develop road and railway infrastructures in order to create a multimodal network able to connect Montenegro with other European countries and be competitive in short sea shipping. **Score assigned: 0**
- **Employment:** Planned revitalization of maritime transport has as the main goal the employment of maritime personnel. **Score assigned: +**
- **Policy relevance:** There is a good collaboration between Government and Ministry of Maritime Affairs and “Barska plovidba” and it is likely to continue in order to enlarge the cargo fleet. This will allow the starting of international collaboration with China in terms of construction and with other interested partners. One of the goals of the Transport Development Strategy of Montenegro concerns also the development of the Port of Bar and the development of multimodal transport in order to enlarge the use of potentialities of the Port. **Score assigned: +**
- **Spill-over effects:** If the planned revitalization of maritime transport and connection with Trans-European Transport Network (TEN-T) will be achieved, positive effects are expected on roads and railway transports. **Score assigned: +**
- **Sustainability:** Long-term sustainable development of the Port, on a very competitive transport market, mainly depends on dynamics and level of connection of Montenegrin transport system in TEN-T. **Score assigned : 0**

Marine aquaculture

- **Innovativeness:** Marine aquaculture in Montenegro is still facing problems with obsolete equipment. There are not enough funds to invest in innovation of this sector, so in the near future it is still not expected. **Score assigned: -**
- **Competitiveness:** Morphological position of Montenegro and its Boka Kotorska Bay offer a great potential for marine aquaculture that could make Montenegro competitive in marine aquaculture production. Researches executed by the Institute of Marine Biology in Kotor showed that the aquatic environment, especially Boka, have remarkable conditions for natural development and artificial cultivation of mariculture – collection of brown and red algae, cultivation of mussels and oysters. The capacity of Boka for mussel cultivation is estimated at 300 wagons a year. The Montenegrin tourist market, which will be large consumers of fish, is about to experience significant growth. **Score assigned: +**
- **Employment:** Marine aquaculture in Montenegro still doesn't offer good conditions to fishermen and is still not in a development phase, so positive impacts on employment are not expected. **Score assigned: 0**
- **Policy relevance:** Marine fisheries are of particular importance to EU and now that Montenegro is a candidate for entering in EU Ministry of Agriculture and Montenegrin government are preparing to harmonize their legislation with the Common Fisheries Policy. **Score assigned: +**
- **Spill-over effects:** Until the marine aquaculture doesn't achieve a significant amount of production and improvement of equipment spill-over effects are not expected. **Score assigned: 0**
- **Sustainability:** One of the main focus areas of the Fisheries Development Strategy prepared by the Ministry of Agriculture is protection and sustainable use of marine and freshwater fisheries resources. **Score assigned: +**

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

In line with the methodology of this study, most relevant and marine and maritime activities with most future potential will be chosen considering the results obtained through the analysis of future potential activities. As attested, most of the activities should be considered as collateral to tourism. Water projects will be considered together to yachting and marinas, considering that (at least in the short-run) the new water projects mainly entail marinas.

Table 8 - Sets of top-7 activities ranking in order of size/growth/future potential

Top-7 current size	Top-7 recent growth	Top-7 future potential
Coastal tourism	Cruise tourism	Coastal tourism
Shipbuilding and ship repair	Yachting and marinas	Water projects
Passenger ferry services	Coastal tourism	Yachting and marinas
Fishing for human consumption	Marine aquaculture	Passenger ferry services
Water projects	Short-sea shipping (incl. Ro-Ro)	Shipbuilding and ship repair
Marine aquaculture	Passenger ferry services	Short-sea shipping (incl. Ro-Ro)
Short-sea shipping (incl. Ro-Ro)	Fishing for human consumption	Marine aquaculture

Table 9 - 6 most relevant and promising marine and maritime activities

6 most relevant and promising marine and maritime activities
Coastal tourism
Yachting and marinas (including water projects)
Passenger ferry services
Marine aquaculture
Shipbuilding and ship repair
Short-sea shipping (incl. Ro-Ro)

4.1 Overview of the 6 most relevant and promising marine and maritime activities

Coastal tourism

Coastal tourism is by large (considering the number of enterprises) the largest marine and maritime activity. It must also be included as one of the fastest growing, if we consider the growth rate of arrivals in the latest years. Travel and tourism has played a central role in Montenegro's dramatic growth and transformation. It is expected that its economic impact is going to grow further, considering that one of the commitments of the Government of Montenegro is to ensure sustainable development of coastal tourism.

Yachting and marinas (water projects)

Yachting and marinas, a luxury niche, has a growing reputation in Montenegro. Available data make difficult to estimate the economic impact of this sector but in the latest years there has been a 6% CAGR in marina arrivals. In order to have lesser pressure on the infrastructure and the environment, it is considered much more important to attract sailing yachts than cruisers. One of the goals of Montenegrin Government and Public Company for Montenegrin Coastal Zone Management is to develop this kind of tourism. Suggested nautical development activities are to design and equip the existing nautical places and the construction of new modern equipped marinas that would compete to the similar ones in the Mediterranean.

Passenger ferry services

A very large number of enterprises are registered as passenger ferry services, positioning this activity at the third place in this specific ranking. Most of them operate as “taxi boats” during the summer season. Unfortunately, passenger arrivals from abroad have decreased in the latest years. This has to be considered in the perspective of international economic crisis, especially in Italy, from where many tourists arrive by sea. In the next future, this situation should improve and traffic is expected to increase again.

Marine aquaculture

Due to limited space, marine aquaculture is currently not an important activity in the Montenegrin economy. Production has not grown in the latest years; however, researches executed by the Institute of Marine Biology in Kotor showed that the aquatic environment have remarkable conditions for cultivation of mussels and oysters, and new forms of aquaculture can be developed in open waters. Demand is expected to increase, especially due to tourist activities.

Shipbuilding and ship repair

A very high number of enterprises are found under the ship repair group, making this maritime activity the fourth one in this specific ranking. Among these enterprises, one has the biggest ship repair yard in the Southern Adriatic. Future development is linked to the attempt of forming a joint venture with Porto Montenegro, which would deal with the repair of yachts and mega yachts.

Short-sea shipping (incl. Ro-Ro)

Only two enterprises are registered as shipping societies. Furthermore, due to economic crisis, transport of goods has decreased in the latest years. In spite of these figure, we believe that this activity can have a moderate future potential. The 100% state-owned stock company “Crnogorska plovidba A.D. Kotor” has recently (2012) bought 2 bulk carriers (35.000 DWT each). The aim of the company seems to develop further in the bulk sector. Furthermore, in Trans-European Transport Network, the Port of Bar is included in the list of ports of regional importance, through which, the Adriatic Corridors – Motorways of the sea will be developed.

4.2 Description of the nature of each of the 6 marine and maritime activities and their value chains

Coastal tourism

Coastal tourism in Montenegro has a potential to be very competitive as one of the most attractive tourist destinations in the world. Development of this economy sector has the main priority in Montenegrin economy. It is characterized by the use of natural resources, cultural heritage, healthy tourism and nautical tourism. Still many sectors need to be developed since coastal tourism is mainly based on tertiary activities. Even though coastal tourism in Montenegro can be described as progressive it still has some lacks. Position of the country is weak, it lacks the financial potential, marketable, diverse tourist products with sufficient accommodation capacities, well qualified staff and well-functioning public utility infrastructure. Foreign tourists are coming back slowly and demand from Serbia is only 6 week in the peak season. Now the Montenegro is trying to change its former image as a cheap ex-Yugoslavian mass oriented destination.

The present volume of tourists causes an excessive user concentration both on the summer months and on the coast. Accounting for the grey market, the coast makes up over 95% of all overnight stays - mostly in the holiday period July-August. This peak load has adverse economic, ecological and quality impacts. It overstretches the infrastructure and beach capacity, impairs job attractiveness and sometimes conveys an impression of mass tourism in the high season.

The country was considered by the World Travel and Tourism Council (WTTC) to be the fastest growing tourism market worldwide in 2007. Notwithstanding a slight decrease during the last years, tourism is still seen as a crucial factor for future economic development. This seems to be a viable option if we consider Montenegro’s natural potential, its beneficial position on the Adriatic coastline and the experience in

tourism gained in the many years since the 1970s. Current development in tourism can be surely considered as progressive and dynamic.

Yachting and marinas (including water projects)

Nautical tourism, a luxury niche, also attests to Montenegro's growing reputation. Maritime yachts make abundant use of the ports of Kotor, Budva and Bar, so that the development of the former military port of Tivat into a top class marina – Porto Montenegro - promises to mark a milestone in the quality strategy..

Necessary equipping in marinas includes the entire accompanying infrastructure – electricity and water connections, sanitary connections, showers and the like, than the service of safe keeping boats, and with higher level marinas tourist – boater accommodation in the accommodation capacities of marina. According to these criteria even the marina Bar has certain defects. That is why the marinas in Budva and in Prcanj, and especially other facilities are sometimes called marina (e.g. harbor in Herceg Novi or harbor Kalimanj in Tivat).

For Montenegro, a country with limited carrying capacity, it is considered much more important to attract sailing yachts than cruisers, both for greater revenues and the reduced pressure on the infrastructure and the environment.

For now there is no informational support with regular marine weather forecast (in summer and in foreign languages), nor precise and updated nautical maps, nautical guides with detailed lists of all moorings and anchorages, and other specialized material for boaters.

Construction of new marinas, as well as new promenades, is realized under the control and planning of the Public Enterprise for Coastal Zone (PECZM-“Morsko dobro”) of Montenegro, established in 1992 (under the jurisdiction of the Ministry of Sustainable Development and Tourism) with the aim to manage the coastal zone in order to provide the protection of the area and to ensure its proper arrangement and sustainable development.

The Government has announced several more projects for marina development along the coast.

Marine aquaculture

Mariculture in Montenegro is regulated by the Law on Marine Fisheries and Mariculture (Official Gazette of Montenegro, 56/09). Mariculture activities are currently carried out exclusively in the Bay of Kotor (87 km²), which is sheltered and suitable space primarily for the cage fish farming and bivalve farming on floating plantations. Cultivation of bivalvia is given preference in the Bay of Kotor, due to the limitation of the environment.

Spatial plan for Special Purpose Coastal Zone (2007) determined areas for mariculture in the Bay of Kotor on the basis of data on the quality of the natural environment, existing and planned use of space, population density, infrastructure, economic, social and public activities on the subject area.

Mariculture zones are defined in 3 categories by the degree of meeting required conditions: 1st category ZONE due to the adequacy of all preconditions is determined only for mariculture and complementary activities; 2nd category ZONE is for mariculture and other business activities that do not have negative impact on mariculture, but due to certain circumstances mariculture does not have a priority; 3rd category ZONE is the zone where mariculture cannot be performed under any circumstances.

Farmed species in mariculture:

- Mediterranean mussel (*Mytilus galloprovincialis*)
- European flat oyster (*Ostrea edulis*)
- Gilthead seabream (*Sparus aurata*)
- European seabass (*Dicentrarchus labrax*)

Shipbuilding and ship repair

Montenegro has the biggest ship repair yard in the Southern Adriatic and is located in Bijela, in Boka Kotorska bay, one of the safest natural harbours in the world. Its favourable geographical position is complemented by the Port of Bar, as well as by Italian, Greece and Croatian ports. Three international airports are located nearby Tivat (20 km), Dubrovnik (30 km) and Podgorica (70 km) which facilitate urgent delivery of spare parts and materials, as well as quick communications for clients. Climatic conditions are also favourable as mild winter temperatures permit year-round operations, and humidity levels are low.

Its competitive advantage is provided by its location, availability of cheap labour, prices and free visa regime which already positioned this shipyard on the world market. Now the shipyard is trying to realize the project of forming a joint venture with Porto Montenegro, which would deal with the repair of yachts and mega yachts. Privatization of the company is planned. The ship repairing yard Bijela, in the past five years was the largest exporter of production services in Montenegro. Next to this giant company there are 55 companies registered for the activity of shipbuilding and ship repair.

Short-sea shipping (incl. Ro-Ro) and passenger ferry services

Montenegro has six ports: Bar, Kotor, Zelenika, Budva, Risan and Tivat. However, the Port of Bar performs more than 95% of all port activity in the country. In Trans-European Transport Network, the Port of Bar is included in the list of ports of regional importance, through which, the Adriatic Corridors – Motorways of the sea will be developed. Ministry of transport, maritime affairs and telecommunications is also actively involved in AdriaticMoS, a common IPA project of all Adriatic countries with the aim of creation of unique and common strategic development document for development of Motorways of the Sea system.

The strategic location of the Port Bar as a real hub for maritime 'highways' and bidding that will adequately respond to the growing demand in the transport sector gives a good potential for short sea shipping development in Montenegro, that is yet not competitive on international market due to insufficient investment in infrastructure development and equipment, delays in structural reforms and privatization. In order to implement such possibilities, construction of new and reconstruction of existing terminals for combined transport at railroad stations Bar, Podgorica and Bijelo Polje is planned. Potential inland connections to Bar are also associated to the development of a new Pan European Corridor, connecting Timisoara – Vršac – Belgrade – Čačak, possibly Ivanjica – Boljare – Bar – Bari; actually, this corridor is not included in the list of ten Pan-European transport corridors defined at the second Pan-European transport Conference in Crete (March 1994), but is considered of strategic importance by Serbian authorities for which is sometime indicated as the Corridor 11.

In terms of private-public partnership related to Port of Bar, it is proper to emphasize that by privatization of majority part of the state capital in the company and by means of long-term concessions, partners who will provide increase and appropriate structure of turnover and investments would be required, both for port equipment, devices, facilities and objects, and in development projects of construction and improvement of infrastructure and space. Reforms mean optimization of the system through process of restructuring, implementation of Landlord organization model and privatization of all operative activities.

Progress has been made in the field of maritime transport and in the development of nautical tourism. In 2011 Montenegro has gained the status of observer in the Paris Memorandum about control of the " Port State " (Paris MOU on Port State Control), which lifted inspection of navigational safety to a higher level in accordance with the regulations of the European Maritime Safety Agency (EMSA).

The General Secretary of IMO informed the Ministry of Transport, Maritime Affairs and Telecommunications that Montenegro is effectively on the "White list" as of 3rd of June 2006. That means that all authorizations issued to Montenegrin sailors by Montenegrin port authorities fulfill standards of IMO Convention on standards for training, issuance of certification and watch-keeping (STCW Convention) and the same will be recognized by maritime authorities of all IMO member countries.

In the field of maritime transport, the Ministry of Transport, Maritime Affairs and Telecommunications will intensify activities on ratification of IMO and UN Conventions, as well as standards of Paris Memorandum

of Understanding and European Maritime Safety Agency (EMSA), that is, conventions and agreements from regional Mediterranean and Adriatic initiatives, with accent to safety and security of navigation and pollution prevention from vessels. These activities will, inter alia, represent also strengthening of administrative capacities of maritime authorities.

4.3 Description of economic and infrastructural scenario

Coastal tourism

Despite the rich cultural and historical heritage the coastal tourism in Montenegro is mainly based on swimming tourism thanks to its natural resources and clean bathing water, so the Montenegrin coast experienced an expansion of private beaches, restaurants, bars, hotels near the coast and also domestic offer of rooms which are the main resource of earnings and jobs. Now the Montenegro is trying to develop climatic, health and medical tourism, sports (sailing, rowing, windsurfing, diving, boat renting etc.), nautical, congress tourism (especially out of season) as well as agro-tourism and manifestation with cultural content.

Also the Government is moving towards the image of high yield destination. For example filming of the movie *Casino Royal* at the Hotel Splendid near Budva became an attraction for famous persons. Various programs, festivals, carnivals and sport events are contributing to cultural and entertaining tourism in this area. Budva Riviera is the most developed one with built tourist facilities where besides swimming tourism also religious tourism is in the phase of development. The southern part of the coast is the one that is less developed but the most naturally preserved one. Kotor Bay (as property protected by UNESCO) is not attractive for swimmers but has a good potential for art lovers, hikers and mountain bikers, lovers of water sports and diving and is offering this kind of activities but still needs to work on a better promotion and organization of the above mentioned offers. Herceg Novi (Igalo) stands out as a main tourist center specialized in health tourism. Foreign direct investments are influencing the development of coastal area.

Below there are statistic figures that show the growth of coastal tourism sector:

Table 10 - The total contribution of travel and tourism to GDP

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Montenegro	21,6%	24%	16%	15,7%	17,1%	19,7%	22,9%	25,5%	27,4%

In Montenegro, in 2012, tourists realized 1.439.500 arrivals which is 4,8% more in comparison with the previous year 2011, while they made 9.151.236 overnight stays which is 4,3% more than in 2011. Overnight stays of domestic tourists represent 11,1%, while the foreign tourists represent 88,9% of all overnight stays in 2012.

Concerning the structure of overnight stays of foreign tourists, in 2012, the most of them were realized by tourists from Serbia (28.9%), Russia (24.4%), Bosnia and Herzegovina (8.3%), Ukraine (4.3%), Kosovo (3.1%), Poland (2.4%), Germany (2.3%), Czech Republic (2.1%). Tourists from other countries realized 24.2% overnight stays.

Concerning the structure of overnight stays by type of resort, the most of them were realized in seaside resorts (96.8%).

Main activities of the Public Enterprise for Coastal Zone (PECZM-“Morsko dobro”) are: renting of the beaches and locations for seasonal tourist and service objects during the summer season, building and maintenance of the coastal infrastructure such as sea walls, ports, docks, and other public areas, management of the local ports, monitoring of the bathing water quality on beaches, international cooperation and participation in international projects, promotion of environmental protection, participation and cooperation with local municipalities and national agencies in management of protected areas and other environmental issues.

Yachting and marinas (including water projects)

In 2012, the total of 2.987 foreign vessels for entertainment, sport or recreation entered the internal sea waters of Montenegro which indicates an increase of 0.8% in comparison with 2011. Of the total, there were 2.438 vessels which arrived by sea, and 549 vessels which were transported by land.

By type of foreign vessels for entertainment, sport or recreation in the internal sea waters of Montenegro, there were the largest number of arrivals of motor yachts (47.9%), sailboats (35.3%), and other vessels (16.9%).

Number of persons arrived on these vessels in 2012 was 14.494, which is an increase of 3.7% in comparison with 2011. By citizenship, the largest number of arrived persons on these vessels was from: Great Britain (11.4%), Italy (9.1%), Germany (6.3%), Austria (5.4%), Croatia (4.5%), France (3.6%), SAD (3.4%) and other countries (56.3%).

Some concern about the environmental sustainability of further growth of the coastal tourism, including building of new facilities such as hotels and marinas, does exist. The Public Enterprise for Coastal Zone (PECZM-“Morsko dobro”) of Montenegro has a central role in order to balance economic and environmental aspects, and its importance in the future is expected to increase in order to guarantee this equilibrium.

Passenger ferry services

Passenger services are quite developed at local level. There are 109 enterprises registered for passenger maritime services that mainly operate as “taxi boats” during the summer season, next to one big enterprise that operates on international level connecting, with two ships, Bar with Bari and Ancona. “BARSKA PLOVIDBA AD” (Montenegro Lines) is a joint stock company with the head office in Bar. The Company is established with the objective of performing the maritime traffic, the marina activities, international freight forwarding, maritime agency, and catering businesses, etc. The two passenger ships have the following capacities: Sveti Stefan I: 399 rooms with 240 beds in cabins, cargo capacity is 355t and Sveti Stefan II: 720 rooms with 510 beds in cabins, cargo capacity 36 trucks or 225 cars. By the end of the year 2012 the company had 60 employees, of which 49 for undetermined period and 11 for determined period. Average net salary in 2012 was 777,56€. Besides these employees the company periodically hires 110 seamen. Even though the company had the decrease of passengers still it is managing to cover all of its costs and is planning to purchase two more ships in order to enlarge its cargo fleet.

Number of passengers from-to Italy has decreased on the last years, probably as a consequence of the economic crisis (see figures below).

Table 11 - Number of passengers transported by the company that connects Bar with Bari and Ancona

Year	Passengers
2005	78.281
2006	89.855
2007	90.872
2008	89.151
2009	73.724
2010	68.856
2011	69.020

At the moment, no specific threats for a sustainable growth of this activity have been identified.

Marine aquaculture

Although mariculture sector in Montenegro is at the moment not developed to its full capacity, on the other hand it has a very great potential for development.

Mariculture activities are currently carried out exclusively in the Bay of Kotor (87 km²), which is sheltered and suitable space primarily for the cage fish farming and bivalve farming on floating plantations. There are

now 16 farms rearing Mediterranean mussel using the long line system of production, 2 farms rearing sea bass and sea bream using cage farming system. One farm is licensed to produce oyster, but in 2011 had no commercial production.

Marine production is focused on three species, as shown in the following table

Table 12 - Aquaculture production by species

Species farmed	2007	2008	2009	2010	2011
<i>Dicentrarchus labrax</i>	38,50	37,50	60,00	60,00	60,00
<i>Mytilus galloprovincialis</i>	156,28	200,00	190,00	150,00	200,00
<i>Sparus aurata</i>	38,00	37,50	55,00	60,00	60,00
Total (ton)	350,14	566,80	517,00	720,00	820,00

The technology applied to date is rather old. Existing mussel ropes are not laid correctly resulting in low yields, variable growth rates and comparatively high levels of sorting during harvest. For now the production in Montenegro is limited only to a Bay of Kotor.

Low development of mariculture sector in Montenegro is caused by low capital investments in production, weak representative organization, high prices due to low production and generally in Montenegro consumption of fish and marine aquatic products is low (2kg – 4kg per capita).

Environmental sustainability in the Bay of Kotor is probably guaranteed, thanks to a careful planning of the most suitable zones for aquaculture. Further growth in the bay does not appear possible, but mariculture can find new forms of development in open waters.

Shipbuilding and ship repair

The "Adriatic Shipyard Bijela" is the biggest ship repairing yard in the Southern Adriatic. The shipyard was established in 1927, and nowadays it has a large experience and extraordinary human, expert and technical capacities. It is completely equipped for repairing and reconstructing ships and other vessels, of all types and for all purposes, of up to 120.000 deadweight tonnes. Besides, the shipyard is also equipped for building smaller maritime objects such as barges for various purposes with or without own drive, pontoons, work platforms and similar ones. There is also a training center for training seafarers and workers in the shipyard.

The Adriatic shipyard Bijela is a stock company with 62% of national capital, with 597 employees; it exclusively deals at foreign market. Next to this large enterprise there are also 55 smaller enterprises registered for ship repair.

Shipyard, a predominantly exporter, operating in the world market is directly subject to the impact of the global economic crisis, namely by the large disturbances in the maritime industry caused by developments in the markets of goods and capitals.

A direct consequence of the crisis was the decline in employment due to capacity reduction in demand and a fall in prices of services.

Customer satisfaction quality of services provided by the shipyard led to the fact that clients are mainly from the Western markets: Germany, Cyprus, Switzerland, Italy and others. In times of crisis, when the repairs are restrictive the shipyard executes generally essential repairs needed to get class ships.

In 2012, 77 foreign and 10 domestic vessels were overhauled. Employees were 518, average net salary per employee amounted to 575 Euros. Average salary depends also on overtime works that is necessary to meet the deadlines and use the capacities of the shipyard. Due to deficit of production workers sometimes subcontractors are engaged, especially when the work is increased.

In January 2012, the Government of Montenegro approved a debit with the state guarantee for an amount of 5,88 million Euros, of which the shipyard has spent 1 million Euros for separation, packing and relocation of used grit (all in 2012).

Throughout the whole crisis period the shipyard managed the costs by the project of decreasing the costs and in that way amortized maximum impact of global economic crisis. Crisis influence is best seen through the decrease of the total revenue of the shipyard from 26.7 million Euros in 2008 to 16,5 million.

To purchase a majority stakes of the shipyard now are interested foreign investors from Ukraine, Holland and Turkey.

Due to the limitation of the territory, further development of this economic sector, such as all the sectors developed on coastal areas, is restricted by the competence for space. At this scope, a proper planning of coastal areas is required.

Short-sea shipping (incl. Ro-Ro)

The shipping industry, as one of the basic parts of the maritime economy, has come into an unenviable position. The technical condition of the fleet, sanctions of the international community during the nineties disabled operations of the ships, recessions on the world maritime market, ownership transition, attrition of human resources etc. contributed to this situation. After 1996 the maritime shipping industry had a slow recovery process.

Concerning revitalization of maritime economy in Montenegro, it is inevitable to make a short background and review of planned activities related to the enterprise “Crnogorska plovidba A.D. Kotor” that connects Montenegro with Italy. Namely, at the beginning of 2004, Government established this company, in order to intensify activities on more significant development of Montenegrin mercantile marine, which after international sanctions, run into unsolvable problems and almost lost all its ships. However, without state guarantees or provision of funds for participation in credit arrangement, it was not possible to start with revitalization of Montenegrin shipping up to now. With intention of undertaking concrete steps in order to implement investment program of maritime economy revitalization, the Ministry of Transport, Maritime Affairs and Telecommunications, in cooperation with the Ministry of Finance, has prepared, and Government has adopted the *Elaborate on economic viability of investment in ship procurement for “Crnogorska plovidba”*. Results of economic-financial analysis show that investment program is feasible and financially sustainable. Through the implementation of investment project in question, direct impact on improvement of foreign-trade balance will be achieved. The project is considered as initiation of significant shipping development in Montenegro, with aim to provide -through one profitable activity having an old tradition in Montenegro- employment for sailors and connection with educational system. It implies that ships of this company will be completed with crew from Montenegro.

“Crnogorska plovidba A.D. Kotor” is a 100% state-owned stock company – the Government of Montenegro being a 99,97% shareholder and the Bureau of Employment being a 0,03% shareholder. The company has made contracts with Shanghai Shipyard Co., Ltd.-China for building two Handysize bulk carriers (35.000 DWT each). The first vessel, M/V “Kotor”, has been delivered on 12th January 2012 and fixed on time charter basis. The second vessel, M/V “Dvadesetprvi maj”, has been delivered in August 2012 and employed on time charter basis as well. The aim of the company is to develop further in the bulk sector, first of all by forming a fleet of Handysize and Handymax bulk carriers.

Good transported has been 1.227.877 tonnes in 2012, with a -6% CAGR since 2009.

At the moment, no specific threats for a sustainable growth of this activity have been identified.

4.4 Regulatory environment

Coastal tourism

Even though the Law on Spatial Development and Construction of Structures regulates the construction in coastal zone, Montenegro is still facing the problem of illegal construction and waste water management.

Law on Tourism; Number: 01-324/7. This Law regulates the conditions and methods of tourism and hospitality industry and states that planning and implementation of tourism development policy be in line with the Tourism Development Strategy. The principles of the above mentioned law are sustainable

development, protection of natural and cultural heritage, local and international development and responsibility in using the touristic surface and development of tourism and supporting activities. Law on tourism is also supporting the partnership of private and local sector together with the civil one when it's about planning, forming and placement of tourist offer on the market. All the above mentioned principles will have a good effect on the development of the coastal tourism. Also by this Law a central tourist register will be established that will help in the collection of all the relevant tourist data.

Law on Spatial Development and Construction of Structures; Number: 01-1567/2. This Law regulates the system of spatial development of Montenegro, the manner and requirements for construction of structures, as well as other matters of importance for spatial development and construction of structures. This Law could have the positive effect on the uncontrolled building in the coastal area in a way that it could minimize the "wild" construction on the coastal area.

Yachting and marinas (including water projects)

Law on Safety of Maritime Navigation (draft). This law regulates the conditions for the safety of maritime navigation and the ability of vessels to sail the internal waters and territorial sea of Montenegro and other issues of importance to the safety of maritime navigation. The draft law regulates the issues related to the establishment of the ability of ships and boats to sail and its calibration, ship's documents, records and books, the ability to use a floating and fixed offshore facility.

Marine aquaculture

There are some problems in Montenegro with illegal fishing from foreign countries. The use of dynamite is still in use by some fishermen and inspectors for the fishing activities should reinforce their activities in order to block fishing in areas where the fish spawn, block the illegal fishing and protect the regular fishermen. Also the problem is that there are not enough inspectors. Other issue is that the fishermen have no insurance if accidents happen, also health insurance they have is not enough. Taxes on fishing and mooring should be decreased. Other issue on which the fishermen are complaining is the fact that they cannot directly sell their fish on the local markets in Montenegro, but they have to sell it to the third persons that will put it on the market.

Only in theory the *Law on Marine Fisheries* is good, and a positive impact is expected if the authorities succeed to implement it and to make all sides to respect it.

Law on Marine Fisheries. This law regulates the management of biological resources from the sea, includes hunting, breeding and protection of fish and other marine organisms. Law on marine fisheries is putting an accent on protection of biodiversity of the sea and preservation of the fish and other marine organisms. There are many measures (prohibition of discharge of liquid and solid wastes, prohibition of stocking, release of non – native species etc) to be respected in order to preserve the sustainable reproduction of the species and to guarantee the future production of the fish and marine aquatic products.

When its about the *Law on the protection of the sea from pollution*, the legislative framework is shaping up and in a few years is expected the full effectiveness of state authorities responsible for the enforcement of legal projects. To achieve full efficiency in all countries bordering the Adriatic Sea, all legal and other projects dealing with environmental protection should be coordinated.

For the laws detailed below, according to the stakeholders, the positive impact is expected if the Government finds the way to implement them in the right way.

Shipbuilding and ship repair

Law on Ports; Number: 01-1545/2. This Law regulates: legal state, division of ports, management, fees, concessions, order, inspection supervision and other issues of importance to the port of Montenegro. This Law sets up a legal framework for comprehensive reform of ports and port enterprises, their restructuring and privatization. Regulation of their legal status (especially in relation to completing transformation of ownership structure, clear definition of private and public functions and consequent definition of management and organizational models for ports) could help to enable adequate positioning of the ports

on the market and strategic partnership with foreign investors, which are necessary to improve state of port infrastructure and equipment.

Law on Safety of Maritime Navigation (draft). See above

Short-sea shipping (incl. Ro-Ro) and Passenger ferry services

Law on Safety of Maritime Navigation (draft). This law regulates the conditions for the safety of maritime navigation and the ability of vessels to sail the internal waters and territorial sea of Montenegro and other issues of importance to the safety of maritime navigation. This draft is made in order to regulate the law of Montenegro and issues related to security and safety of navigation at sea, national origin, identification and registration of the ship, it was necessary to enact the security and safety of sailing. There is a need for this law in order to comply with EU legislation and international conventions in the field of security and safety of navigation. Whole range of conditions for safe navigation (waterways in the territorial sea, jurisdiction of the port authorities, monitoring and traffic management etc) are defined that will give a better security protection on the sea and on the Montenegrin ports.

Law on the Sea; Number: 01-1469/2. This law regulates the marine and offshore area of Montenegro, namely: internal waters, territorial sea, the exclusive economic zone, continental shelf, the prohibition of entering, stop and persecution of ships. Also defines country's sovereignty on the sea, which refers to coastal sea, air above the sea, sea bottom and the space beneath it. In the article 2 of the Law on the sea are listed general regulations (rights to execute researches to preserve and develop marine richness, and to use it, to cooperate with states in the region and international organizations in order to prevent pollution of the sea, and also the state promotes the regional cooperation in urgent reacting in case of an accident that causes pollution of the marine environment) that mainly point to preservation of the sea, which will be a positive influence for the prevention of pollution from vessels. The law also regulates the safe transport of goods and passengers.

Law on the Budget of Montenegro; Number 01- 1884/2. With this law, the financing for the purchase of new cargo ships is granted. This decision could help in order to enlarge the Montenegrin cargo fleet and to enlarge the shipping industry.

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

The table below provides an overview of growth drivers and barriers to growth summarising both benchmark and SWOT analysis.

Table 13 - Growth drivers and barriers to growth for Coastal tourism

COASTAL TOURISM	Growth drivers	Barriers to growth
Maritime research	----	----
Development and innovation	Recommendations for economy policies in Coastal Tourism Sector by the Central Bank of Montenegro and policies for sustainable development	Pronounced seasonality, unauthorised and unplanned construction, limited use of IT technology
Access to finance	Foreign investors very interested in tourism activities	Seasonal revenue
Smart infrastructure	Plans for combined transport connecting ports with other transport facilities	Need for infrastructural upgrades in the mass tourism sector Not resolved problem for waste water deposition. No boats organised for all – day cruise travelling.
Maritime clusters	The entire coast represents a touristic cluster with hotels, restaurants, services for tourists and also marinas for yachting. Diversity confined to a small area. Developed tourism that supports creating of clusters	----
Education, training and skills	Presence of the International School for Tourism and Hospitality and International Language Centres	Deficit of educated employees in management roles and need to import workers from other countries during the high season.
Maritime spatial planning	Public enterprise for Coastal Zone Management “Morsko dobro” dealing with coastal spatial planning.	----
Integrated local development	CAMP Project, National Strategy of Sustainable Development of Montenegro.	----
Public engagement	Engagement to promote health, sport and cultural tourism. Activity of the Public enterprise “Morsko dobro”, political stability, good relations with neighbouring countries Marketing and advertisement of distinguishing local products and “Wild Beauty” of Montenegro	Overlapping of jurisdictions between Public enterprise “Morsko dobro” and municipalities.

Table 14 - Growth drivers and barriers to growth for yachting and marinas (including water projects)

YACHTING AND MARINAS (INCLUDING WATER PROJECTS)	Growth drivers	Barriers to growth
Maritime research	----	----
Development and innovation	Recommendations for economy policies in Coastal Tourism Sector by the Central Bank of Montenegro and policies for sustainable development	Pronounced seasonality, unauthorised and unplanned construction, limited use of IT technology
Access to finance	Foreign investors very interested in tourism activities	Seasonal revenue
Smart infrastructure	One modern private port for yachting and cruises is in construction Plans for combined transport connecting ports with other transport facilities	----
Maritime clusters	The entire coast represents a touristic cluster with hotels, restaurants, services for tourists and also marinas for yachting. Diversity confined to a small	----

YACHTING AND MARINAS (INCLUDING WATER PROJECTS)	Growth drivers	Barriers to growth
	area. Developed tourism that supports creating of clusters	
Education, training and skills	Presence of the International School for Tourism and Hospitality and International Language Centres	Deficit of educated employees in management roles and need to import workers from other countries during the high season.
Maritime spatial planning	Public enterprise for Coastal Zone Management "Morsko dobro" dealing with coastal spatial planning.	----
Integrated local development	CAMP Project, National Strategy of Sustainable Development of Montenegro.	----
Public engagement	Engagement to promote health, sport and cultural tourism. Activity of the Public enterprise "Morsko dobro", political stability, good relations with neighbouring countries Marketing and advertisement of distinguishing local products and "Wild Beauty" of Montenegro	Overlapping of jurisdictions between Public enterprise "Morsko dobro" and municipalities.

Table 15 - Growth drivers and barriers to growth for Marine aquaculture

MARINE AQUACULTURE	Growth drivers	Barriers to growth
Maritime research	Engagement of the Institute of Marine Biology in Kotor, Ministry of agriculture and rural development of Montenegro supports scientific research into aquaculture. Many research programmes focused on aquaculture carried out by Institute for Marine Biology in cooperation with EU countries	Lack of equipment for execution of researches
Development and innovation	Exchange of information and technical assistance through various projects; lectures and researches performed by the Institute for Marine Biology Fisheries Development Strategy; National Fisheries Development Program 2009-2013	Problem of long waiting times to obtain permits
Access to finance	----	Limited access to starting capital or loans to begin farming; access to credit is difficult
Smart infrastructure	----	Limited space for farming (for now only in the Bay of Kotor); lack of adequate fishing ports and market places Very limited production: impossibility to create positive scale effects
Maritime clusters	Boka Bay offers a large protected area that covers about 87 km ² , with good conditions to cultivate mussels. Touristic sites represent an important demand of fish products	Seasonality of demand in touristic centres
Education, training and skills	Institute of Marine Biology	Lack of researches and professionals Need for expert assistance
Maritime spatial planning	Spatial plan for Special Purpose Coastal Zone (2007); determined areas for mariculture Potential sites to expand mariculture offshore	----
Integrated local development	----	Weak representative organizations
Public engagement	Aquaculture and fisheries recognised as a potential and a strategic sector	Problem of long waiting times to obtain permits

Table 16 - Growth drivers and barriers to growth for Shipbuilding and ship repair

SHIPBUILDING AND SHIP REPAIR	Growth drivers	Barriers to growth
Maritime research	----	----
Development and innovation	Presence of the Faculty for Maritime Studies; Leading role of Adriatic Shipyard Bijela	----
Access to finance	Montenegro is taking active steps to set up a favourable business climate for investors	Crisis affecting incomes of the ship repairing yard
Smart infrastructure	Good infrastructure (roads and airport).	----
Maritime clusters	Smaller shipyards can benefit by the presence and leading role of Shipyard Bijela	Still not created clusters
Education, training and skills	Long maritime tradition. Good standard of schooling	----
Maritime spatial planning	----	Limited area is available for shipyards
Integrated local development	----	Conflict with environmental protection and tourism activities
Public engagement	State support	----

Table 17 - Growth drivers and barriers to growth for Passenger ferry services

PASSENGER FERRY SERVICES	Growth drivers	Barriers to growth
Maritime research	----	----
Development and innovation	Constant improvement of ISPS (International Ship and Port Security) code implementation in ports and on ships,	----
Access to finance	----	Budgetary limitations of the Government
Smart infrastructure	One of the goals of transport development strategy is implementation of EMSA (European Maritime Safety Agency) standards	Not enough investments in reconstruction and revitalisation of port facilities Old ferries.
Maritime clusters	No maritime clusters, but touristic activity can be fostered by efficient maritime transport. Passengers are strictly linked to touristic dimension	----
Education, training and skills	Faculty of Maritime Studies Long tradition in forming the marine crew	Majority of Montenegrin crew works for foreign companies outside of Montenegro
Maritime spatial planning	----	Tensions for space between transport and touristic activities. No maritime spatial planning
Integrated local development	----	----
Public engagement	The Ministry of Transport, Maritime Affairs and Telecommunications is engaged to achieve the goals of Transport Development Strategy in Montenegro	----

Table 18 - Growth drivers and barriers to growth for Short sea shipping

SHORT SEA SHIPPING	Growth drivers	Barriers to growth
Maritime research	Faculty for Maritime Studies	No specific researches linked to short sea shipping
Development and innovation	Direct involvement of the Ministry of transport, maritime affairs and telecommunications in the project "Adriatic Motorways of the Sea" Free zones in Bar and Kotor	Bad technical equipment of the port authorities
Access to finance	National funds for buying new ships. IPA funds for the project "Adriatic Motorways of the Sea"	----

SHORT SEA SHIPPING	Growth drivers	Barriers to growth
Smart infrastructure	Future development of the Pan-European transport corridor using the Port of Bar as Adriatic Terminal	Not enough investments in reconstruction and revitalisation of port facilities
Maritime clusters	No clusters related to short sea shipping, but important connections on the so-called Corridor 11 Timisoara-Belgrade-Bar and the Adriatic Corridors – Motorways of the sea	Development of parallel Pan European corridor through Croatia and Albania
Education, training and skills	Faculty of maritime studies Long tradition in training of marine crew	Majority of Montenegrin crew works for foreign companies outside of Montenegro
Maritime spatial planning	----	----
Integrated local development	----	----
Public engagement	“Crnogorska plovidba A.D. Kotor” is a 100% state-owned stock company	Limited funds. State institutions still not efficient

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

Montenegro has adopted the “National Strategy of Sustainable Development of Montenegro” where strategies for several maritime activities are covered. Major attention is given to the concept of sustainable development of marine and maritime activities such as Coastal Tourism, Marine Transport and Aquaculture.

Regarding **Coastal Tourism** as a leading economic activity, the Strategy proposes the preservation of natural resources and environment since it is one of the strongest potentials for coastal tourism in Montenegro. Principle of the Strategy, in order to increase the attractiveness of the coastal zone, is to protect the cultural integrity, respect the basic environmental principles and protect biological diversity on one hand and to find the best balance between economic, social and environmental requirement. Montenegro Tourism Development Strategy to 2020 gives particular attention to new product development as a way to keep the tourist interest, i.e. to develop high-end tourism products not yet fully realized in Montenegro, such as yachting and golf, as well as a new brand of nature-based tourism. Human resource development strategy in the tourism deals with a problem of insufficient professional human resource, thus a specific strategy (Human resource development strategy in the tourism) is focused on the education and training of staff.

There is no explicit strategy for **Passenger ferry service, Short Sea shipping and Shipbuilding and ship repair**. Some of the concerned aspects are covered by the National Strategy of Sustainable Development in Montenegro, some by the Montenegro Tourism Development Strategy to 2020 and also by Transport Development Strategy of Montenegro. All of these Strategies are concentrated on resolving the problems of improving infrastructure and transport systems, where maritime transport should be combined with other forms of transports in order to be able to handle the increase of tourist and freight traffic. One of the ideas is also to include more seasonal ferry lines. Aspiration to provide good accessibility (which is a precondition for the development of other economic sectors) with as low disturbance in the space as possible, minimization of negative impacts on the environment and improved safety, represent the general frame for policy making and implementation in the transport sector in Montenegro (National Strategy of Sustainable Development in Montenegro).

“Montenegro Fisheries Development Strategy and capacity building for implementation of EU Common Fisheries Policy” is a project implemented in partnership between the Ministry of Agriculture, Forestry and Water Management of Montenegro and the European Agency for Reconstruction. This strategy occupies about overcoming of problems such as the use of obsolete equipment, lack of research centers and insufficient capacity for scientific monitoring, key food safety issues in order to achieve a good and healthy final product. Other measure of the strategy for Montenegro, as one of the accession states, is harmonization of legislation with the EU Common Fisheries Policy.

Table 19 - Policies/interventions towards most promising marine and maritime activities and the Blue Growth objectives

Level	Strategies	Objectives	Most relevant and marine and maritime activities	Links to BG objectives	
National	Strategy : National Strategy of Sustainable Development of Montenegro	<ul style="list-style-type: none"> Objective A: Accelerate economic growth and development, and reduce regional development disparities Objective B: Reduce poverty, ensure equitable access to services and resources Objective C Ensure efficient pollution control and reduction, and sustainable management of natural resources Objective D: improve governance system and public participation; mobilise all stakeholders and build capacities at all levels Objective E: Preserve cultural diversity and identities 	Coastal tourism	<ul style="list-style-type: none"> Healthy environment Increase the growth potential of activities Increase the attractiveness of coastal areas 	Maritime, coastal and cruise tourism
			Passenger ferry services		
National	Strategy : Montenegro Tourism Development Strategy to 2020	<ul style="list-style-type: none"> Objective A: Creation of Sustainable, high quality diverse tourism product Objective B: Enable the growth of revenues and arrivals Objective C: generating new jobs and increasing the standard of living 	Short-sea shipping (Incl. Ro-Ro)	<ul style="list-style-type: none"> Healthy environment Increase the growth potential of activities Increase the attractiveness of coastal areas 	Maritime, coastal and cruise tourism
			Marine aquaculture		
National	Strategy : Human resource strategy in the tourism	<ul style="list-style-type: none"> Objective A: Achievement of qualified and competent human resources through development of institutions for this sector and also reforms of education and professional education for the needs of tourism sector Objective B: helping the Government to direct incentivise the sector, also for the purpose of generating enough of professional staff, skills and expertise Objective C: increasing the efficiency and effectiveness of existing educational facilities and orientation towards existing strategies for the development of the tourism sector, as well as towards the needs of increasing the number of tourism enterprises 	Coastal tourism	<ul style="list-style-type: none"> Increase the growth potential of activities Increase the attractiveness of coastal areas 	Maritime, coastal and cruise tourism
			Coastal tourism		
National	Strategy : Transport Development Strategy of Montenegro	<ul style="list-style-type: none"> Objective A: Safe and secure transport Objective B: Quality maintenance of transport infrastructures Objective C: Efficiency of Transport Objective D: Economic development Objective E: minimize the negative impacts of transport on environment. Objective F: integration in the European Union 	Shipbuilding and ship repair	<ul style="list-style-type: none"> Healthy environment Increase the growth potential of activities Increase the attractiveness of coastal areas 	Maritime, coastal and cruise tourism
			Short-sea shipping (incl. Ro-Ro)		
National	Montenegro's Fisheries Development Strategy and capacity building for implementation of EU Common Fisheries Policy	<ul style="list-style-type: none"> Objective A: development of technologically modern farming sector, in both fresh and salt water, based on autochthonous species. Objective B: development of a sector that is in harmony with the needs of the environment, landscape and competing claims of alternative users to provide competitively priced top quality product 	Marine aquaculture	<ul style="list-style-type: none"> 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 guidelines, multiannual national strategic plans and the exchange of best practice 	Aquaculture
National	Strategy for the sustainable economic growth of Montenegro by introducing clusters 2012	<ul style="list-style-type: none"> Increasing the export of local products and import substitution; Creation of new companies and now jobs maintaining the level of employment 	Coastal tourism	<ul style="list-style-type: none"> Healthy environment Increase the growth potential of activities Increase the attractiveness of coastal areas 	Maritime, coastal and cruise tourism

Table 20 - Policies/interventions towards most promising marine and maritime activities and the Smart Specialisation Strategies³

Level	Strategies	Objectives	Most relevant and promising maritime activities	Links to Smart Specialisation Strategies
National	Strategy : National Strategy of Sustainable Development of Montenegro	<ul style="list-style-type: none"> Objective A: Accelerate economic growth and development, and reduce regional development disparities Objective B: Reduce poverty, ensure equitable access to services and resources Objective C: Ensure efficient pollution control and reduction, and sustainable management of natural resources Objective D: Improve governance system and public participation; mobilise all stakeholders and build capacities at all levels Objective E: Preserve cultural diversity and identities 	<ul style="list-style-type: none"> Coastal tourism Passenger ferry services Marine aquaculture Short-sea shipping (incl. Ro-Ro) 	<ul style="list-style-type: none"> Clusters Innovation friendly business environments for SMEs Cultural and creative industries Financial engineering instruments Innovative public procurement Green growth Internationalisation
National	Strategy : Montenegro Tourism Development Strategy to 2020	<ul style="list-style-type: none"> Objective A: Creation of Sustainable, high quality diverse tourism product; Objective B: Enable the growth of revenues and arrivals; Objective C: generating new jobs and increasing the standard of living 	<ul style="list-style-type: none"> Coastal tourism Passenger ferry services 	<ul style="list-style-type: none"> Clusters Innovation friendly business environments for SMEs Cultural and creative industries Financial engineering instruments Innovative public procurement Green growth Internationalisation
National	Strategy : Human resource development strategy in the tourism	<ul style="list-style-type: none"> Objective A: Achievement of qualified and competent human resources through development of institutions for this sector and also reforms of education and professional education for the needs of tourism sector Objective B: helping the Government to direct incentivise the sector, also for the purpose of generating enough of professional staff, skills and expertise. Objective C: increasing the efficiency and effectiveness of existing educational facilities and orientation towards the needs of increasing the number of tourism enterprises 	<ul style="list-style-type: none"> Coastal tourism 	<ul style="list-style-type: none"> Clusters Innovation friendly business environments for SMEs Cultural and creative industries Financial engineering instruments - Innovative public procurement Green growth
National	Strategy : Transport Development Strategy of Montenegro	<ul style="list-style-type: none"> Objective A: Safe and secure transport Objective B: Quality maintenance of transport infrastructure Objective C: Efficiency of Transport Objective D: Economic development Objective E: minimize the negative impacts of transport on environment. Objective F: Integration in the European Union 	<ul style="list-style-type: none"> Shipbuilding and ship repair Short-sea shipping (incl. Ro-Ro) 	<ul style="list-style-type: none"> Clusters Internationalisation Innovative public procurement
National	Montenegro's Fisheries Development Strategy and capacity building for implementation of EU Common Fisheries Policy	<ul style="list-style-type: none"> Objective A: development of technologically modern farming sector, in both fresh and salt water, based on autochthonous species. Objective B: development of a sector that is in harmony with the needs of the environment, landscape and competing claims of alternative users to provide competitively priced top quality product 	<ul style="list-style-type: none"> Marine aquaculture 	<ul style="list-style-type: none"> Clusters Research infrastructures, centres of competence and science parks Internationalisation Financial engineering instruments
National	Strategy for the sustainable economic growth of Montenegro by introducing clusters 2012	<ul style="list-style-type: none"> Increasing the export of local products and import substitution; Creation of new companies and new jobs, maintaining the level of employment 	<ul style="list-style-type: none"> Coastal tourism 	<ul style="list-style-type: none"> Clusters Innovation friendly business environments for SMEs Cultural and creative industries Financial engineering instruments - Innovative public procurement Green growth

Montenegro Tourism Development Strategy to 2020 and National Strategy of Sustainable Development of Montenegro are the strategies more oriented to SSS principles. When it is about clusters, the major importance is given by the Tourism Development Strategy, which evidences that clusters should be harmonized, and this harmonization will be useful for tourism promotion. Also cooperation in municipal

³ Smart Specialisation Strategies (S3) used for this logical analysis have been defined on the basis of the S3 horizontal approaches (or RIS horizontal priorities), as defined in the Guide to Research and Innovation Strategies for Smart Specialisation, available at http://s3platform.jrc.ec.europa.eu/en/c/document_library/get_file?uuid=e50397e3-f2b1-4086-8608-7b86e69e8553. See the Country fiche guide for more details at <http://www.cogeaspa.it/blue-growth-study/country-fiches/?lang=en>.

clusters is one of the measures that should be realized. The Ministry of the Economy realized the importance of clusters for development of micro and medium enterprises, so they gave a proposal for a specific strategy for introducing the clusters in Montenegro; one of the measures to improve transport, is the creation of logistic cluster with activities of combined transport.

Research infrastructures, centers of competence, scientific parks. The Montenegro Tourism Development Strategy to 2020 nominates the importance role of research centers for management of national parks; the National Strategy of Sustainable Development of Montenegro specifies the need to increase budgetary funds for scientific and research work and development and the Montenegro's Fisheries Development Strategy also specifies that there should be at least one purification Centre for the depuration of bivalves.

Universities-enterprise cooperation . One of the measures of the Tourism Strategy is to create required tourism and accompanying infrastructure by implementing human resource development (HRD) strategy with help of Ministry of Education in cooperation with Universities. In HRD Strategy is mentioned that cooperation between enterprises and educational institutions have to be promoted.

Cultural and creative industries. In the Montenegro Tourism Development Strategy to 2020 one of the major goals is to attract tourists in base of cultural contents, but there are no comments that creative industry should be realized.

Internationalization. All the Strategies nominated in the Logical Diagram have the goal to promote internationalization, and each of them have a few proposals in order to achieve it. Montenegro Tourism Development Strategy wants to make coastal cities all-year international destinations to extend the economic growth to the whole year. For the National Sustainable Strategy Development, some natural values and cultural and historical monuments in Montenegro have been recognized by the International Organizations and this could help in attracting and maintaining the interest of international tourists. In the Human Resources Development Strategy, it is highlighted how Montenegrin Government started reform of the educational system with support of international organizations, education of chefs for the international cuisine, presence of International School of Hospitality and Tourism; one of the strategic goals of State Faculty for Tourism and Hotel Industry is internationalization of study programs. Montenegro Fisheries Development Strategy recommends collaboration between marine institute and international agencies in order to gain internationally acceptable accreditation.

Financial engineering instruments. In the National Strategy of Sustainable Development, one of the general goals is providing for a better access to credit funds for producers in primary sectors such as agriculture and fishery.

Green growth. The National Strategy to Sustainable Development points out that present natural resources are not supposed to be exhausted, limiting their use to ensure that they will be available to future generations, and finding equilibrium between economic, ecologic and social concerns.

In order to come closer to Smart Specialization Strategies, Montenegro should consider better horizontal integration of existing sectors and vertical integration from the local to republic level. Most important step is finding a financial framework that would be able to give support and to initiate the activities that will lead towards the realization of Smart Specialization Strategies. Also finding a sustainable way of continuing and developing the initial activities, considering the fact that in Montenegro numerous projects were initiated but due to the lack of funding they had short term effects. Considering the Research infrastructures, centers of competence, scientific parks the main problem is insufficient investments and lack of professional employees, so the main activities should focus on finding the funds and incentives for building the centers of competence, to work on specific education of employees and future employees and to try to minimize the brain drain. Universities – enterprise cooperation should be promoted, maybe initiating from the local level. Cultural and creative industries need to cooperate with other activities in order to attract and give possibility for higher range of persons to be involved. The strategies above mentioned contain numerous good recommendations for internationalization but most of them are in the tourism sector, other maritime economic activities should be more involved. On the local level more initiatives for better awareness of the Green growth are needed, also to support the Montenegrin image of an ecological state.

Sources and references

This Country fiche has been compiled according to a common methodology adopted in the framework of this Study and more specifically in Task 2.

A “Country fiche Guide” and a detailed methodology (“*Methodology for identifying and estimating Maritime Economic Activities using NACE and other data*”) are available at <http://www.cogeaspa.it/blue-growth-study/country-fiches/?lang=en>

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