



STUDY ON DEEPENING UNDERSTANDING OF POTENTIAL BLUE GROWTH IN THE EU MEMBER STATES ON EUROPE'S ATLANTIC ARC

CLIENT: DG MARITIME AFFAIRS AND FISHERIES

FWC MARE/2012/06 – SC C1/2013/02

11TH JULY 2013

REVISED COUNTRY FICHE

COUNTRY

MONTH 2013





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Preface

This country fiche template has been adapted from the sea-basin studies in the North Sea and English Channel (MARE/2012/06 – Ref. E1/2012/01), Mediterranean, Adriatic and Ionian and the Black Sea (MARE/2012/07 - REF. NO 2).

The methodology for assessing the country performance in Blue Growth has been developed following two exchanges with DG MARE, notably on 23rd April and 4th June 2013.

This country fiche contains all information that will be collected by the country experts. It excludes the sections that select the 6 most promising and relevant maritime economic activities that will be selected for further in-depth sector analysis and for which growth drivers and barriers will be assessed. These will be added at a later stage.

As far as possible data will be added to the country fiche by the central data team.

0. General overview

This section presents an overview of the socio-economic characteristics of the country in relation to its specific maritime situation. Both quantitative and qualitative parameters are presented, including the information on sources/ references.

The following elements are described beneath:

Country overview:

- Brief macroeconomic overview of the country, including population size, GDP, (un-) employment, main economic sectors.

Coastal regions:

- Map of the sea-basin (at NUTS 0/1 and NUTS 2 level)
- Brief description of all coastlines of the Atlantic Arc (and all other sea-basins if the country is adjacent to more than one sea-basin) for the specific country, key geographic locations for maritime industry, e.g. big cities, main ports, population in coastal regions (NUTS2)

For countries that cover multiple sea-basins, a distinction is provided of the coastal regions that are belong to specific sea-basins.

1. Marine and maritime economic activities

1.1. Overview of relevant maritime economic activities in a Member State

This section provides an overview of the main maritime activities and their related socio-economic impacts in the Atlantic Arc **at a country (NUTS 0) level**. These economic activities are analysed, described and updated according to the NACE rev. 2 classifications. The chapter consists of a **two step analysis**.

The first step (table 1) includes a data collection and aggregation for socio-economic information¹ which allows for the identification of the most relevant maritime economic activities in the country via their contribution to GVA and employment. This follows three levels of data analysis:

- 1) **EUROSTAT based data** (NACE codes),
- 2) then **official national statistical sources** wherever quantification of data can be derived from these,
- 3) **alternative sources** (outside official statistics, e.g. through consultancy reports, expert interviews etc.). Please see table 2 beneath for further information on some pre-identified sources.
- 4) In addition to that, **other indicators** on the maritime economic activities are assessed, e.g. the share of public vs. privately attributable GVA and employment, the number of enterprises and SMEs. For compiling the category 'other indicators' all three sources can be inserted in.

Any additional maritime economic activities are added to the list provided (table 1) if country experts identify additional areas as potentially important.

Please note: Table 1 contains the most reliable data for each of the maritime economic activities, among those data for each a maritime economic activity as identified by the country expert. Table 1 hence refers to Annex I which provides a full picture of all collected data from relevant sources, e.g. Eurostat, official national statistical sources and alternative sources.

¹ Please see Annex I for a detailed indication on data sources and assumptions made in table 1.

Table 1 - Overview of relevant maritime economic activities in a MS at NUTS-0 level – the example of France

Maritime economic activity		GVA (EUR, million)	Employment	Number of enterprises	Further indicators	Source & Reference year
0. Shipbuilding						
0.1	Shipbuilding (excl. leisure boats) and ship repair					
0.2	Construction of water projects					
1. Maritime transport						
1.1	Deep-sea shipping					
1.2	Short-sea shipping (incl. Ro-Ro)					
1.3	Passenger ferry services					
1.4	Inland waterway transport					
2. Food, nutrition, health and eco-system services						
2.1	Catching fish for human consumption					
2.2	Catching fish for animal feeding					
2.3	Marine aquatic products					
2.4	Blue biotechnology					
2.5	Agriculture on saline soils					
3. Energy and raw materials						
3.1	Offshore oil and gas					
3.2	Offshore wind					
3.3	Ocean renewable energy					
3.4	Carbon capture and storage					
3.5	Aggregates mining (sand, gravel, etc.)					
3.6	Marine minerals mining					
3.7	Securing fresh water supply (desalination)					
4. Leisure, working and living						
4.1	Coastal tourism					
4.2	Yachting and marinas					
4.3	Cruise tourism					
5. Coastal protection						
5.1	Protection against flooding and erosion, preventing salt water intrusion, protection of habitats					
6. Maritime monitoring and surveillance						
6.1/6.2	Traceability and security of goods supply chains, prevention and protection against illegal movement of people and goods,					
6.3	environmental monitoring					

The figures provided in table 1 have been cross-checked with additional literature. The above list (table 2) presents a list of studies compiled at national level that have been pre-identified. If found relevant by the country experts, further studies at national level are listed in table 2 and analysed accordingly. Deviations of the figures in table 1 with the sources in table 2 are explained in the second step beneath.

Table 2 – List of pre-identified national maritime sector analysis

EU Member State	Source
France	Publications from Ifremer. (http://www.ifremer.fr/L-institut)
	French Maritime Cluster. (http://www.cluster-maritime.fr/ http://www.data.gouv.fr/)
	Centre de documentation Economie-Finances (CEDEF).

	(http://www.economie.gouv.fr/cedef)
Spain	Impacto económico del sector del mar by the Centro de Estudios Económicos Tomillo, (http://www.ceet.es/ceet/trabajos-ceet)
	Innovamar, 2011: Cuantificación económica del Sector Marítimo y su desagregación sectorial, Fundación Innovamar. Feb. 2011 (http://www.innovamar.org/desarrolloc.asp?apartado=112)
Portugal	Portuguese Republic, National Ocean Strategy. Including the references to statistics. (https://webgate.ec.europa.eu/maritimeforum/system/files/National_Ocean_Strategy_Portugal_en.pdf)
UK	UK Chamber of shipping, statistics. (http://www.ukchamberofshipping.com/information/key-statistics/)
	Publications from Crown Estate. (http://www.thecrownestate.co.uk/freedom-of-information/publication-scheme/)
	Gov.uk website. (http://www.statistics.gov.uk/hub/travel-transport/other-modes-of-transport/maritime/index.html)
Ireland	Harnessing our ocean’s wealth, July 2012. An Integrated. Marine Plan for Ireland. Roadmap. New Ways. New Approaches. New Thinking. July 2012. (http://www.ouroceanwealth.ie/SiteCollectionDocuments/Harnessing%20Our%20Ocean%20Wealth%20Report.pdf)
Further studies at national level	

NOTE 1: Any findings and deviations of figures (quantitative data on maritime economic activities) derived from this with table 1 will be reported and further explained in Annex I (in column Alternative sources).

Initial Assessment reports of the environmental status of the marine waters, provided by the EU Member States

These Initial Assessment reports² of the environmental status of the marine waters within the Marine Strategy Framework are analysed. These reports comprise an economic and social analysis of the use of marine waters and also cover the economic and social perspective of marine waters.

NOTE 1: Any findings and deviations of figures derived from this with table 1 will be reported and further specified under Annex I (in column Alternative sources).

Wider economic impacts: Indirect economic effects and multipliers

The identified values and figures beneath describe indirect economic (employment and GVA) effects, e.g. through **backward linkages**³ or **induced impacts**⁴ (e.g. as a result of tourism spending). Where possible multipliers⁵ values are identified and indicated beneath.

² These initial assessments are publicly available on the DG Environment website: http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/scoreboard_en.htm and also under Member States’ national administration websites (e.g. HM Government, 2012: Marine Strategy Framework Directive consultation: UK Initial Assessment and Proposals for Good Environmental Status Summary of Responses, December 2012).

³ Backward linkages are economic activities that are suppliers for the maritime economic activity at hand. For example the steel industry is a supplier for shipbuilding. Together they are linked in a value chain.

⁴ Induced impacts are the result of expenditure in a maritime economic activity, which affects other economic activities outside the maritime economic activity itself (e.g. tourism spending on transportation).

⁵ in our definition a multiplier of 1.5 indicate that the indirect employment is 50% of direct employment



NOTE 1: Any findings and deviations of figures derived from this with table 1 will be reported and further specified under Annex (Alternative sources).



The **Second step** presents a **qualitative review** on the relevant maritime economic activities and their status. This overview is based on data gathered in the previous step (table 1) with the specific input and knowledge of the Country Expert.

Wherever possible, qualitative information should be provided, highlighting the size of the maritime economic activity and general trends in recent years. In relation to table 1, also the **adjacent sectors and their impact on employment and GVA** will be assessed. Those activities which are not represented in a country (acc. to table 1) are marked as “not applicable”.

Overview of maritime economic activities in a MS at NUTS-0 level

Shipbuilding

Shipbuilding (excl. leisure boats) and ship repair in your country

Note: In as far as data on naval expenditure and employment is not confidential, a distinction between naval and other ships in terms of GVA and employment will be made

Construction of water projects in your country

Maritime transport

Deep sea shipping in your country



Short sea shipping in your country

Passenger ferry in your country

Inland waterway transport in your country

Food, nutrition, health and eco-system services

Catching fish for human consumption in your country

Catching fish for animal consumption in your country



Marine aquatic products in your country

Blue biotechnology in your country

Aquaculture in saline soils in your country

Energy and raw materials

Offshore oil and gas in your country

Offshore wind in your country



Ocean renewable energy in your country

Carbon Capture and storage in your country

Aggregates mining in your country

Marine minerals mining in your country

Securing fresh water supply in your country

Leisure and tourism

Coastal tourism in your country



Yachting and marinas in your country

Cruise tourism in your country

Coastal protection

Coastal protection (protection against flooding and erosion, preventing salt water intrusion, protection of habitats) in your country

Maritime monitoring and surveillance

Maritime monitoring and surveillance (traceability and security of goods supply chains, prevention and protection against illegal movement of people and goods, environmental monitoring) in your country

1.2. Breakdown of maritime economic activities at regional level (NUTS 1 or NUTS 2) and allocation to different sea-basins

This chapter identifies and analyses primary economic data for the **maritime regions in the country**. This task consists of two main tables collating information related to employment (table 4) and GVA (table 5) per maritime activities per regions.

The breakdown of economic activities is done at NUTS 1 or NUTS 2 level, depending on the availability of data. Besides, the level of regional analysis is determined by where maritime policy strategies and funding programmes are decided (please see suggested level highlighted in bold).

Table 3 - Breakdown of maritime economic activities at regional level

EU Member State	NUTS 1	NUTS 2	Geographical allocation to Sea-basin (NUTS 2 regions)
France ⁶	Nord - Pas-de-Calais	Nord - Pas-de-Calais	North Sea
	Bassin Parisien	Haute Normandie	Atlantic Arc
		Basse Normandie	Atlantic Arc
		Picardie	Atlantic Arc
	Ouest	Pays de la Loire	Atlantic Arc
		Bretagne	Atlantic Arc
		Poitou-Charentes	Atlantic Arc
	Sud-Ouest	Aquitaine	Atlantic Arc
	Méditerranée	Languedoc-Roussillon	Mediterranean Sea
		Provence-Alpes-Côte d'Azur	Mediterranean Sea
Corse		Mediterranean Sea	
Ireland	Republic of Ireland	Border, Midland and Western NUTS-II Region	Atlantic Arc
		Southern and Eastern NUTS-II Region	Atlantic Arc
Spain	Noroeste	Galicia	Atlantic Arc
		Asturias	Atlantic Arc
		Cantabria	Atlantic Arc
	Noreste	Basque Community	Atlantic Arc
	Este	Catalonia	Mediterranean Sea
		Valencian Community	Mediterranean Sea
Balearic Islands		Mediterranean Sea	

⁶ Please note that the Départements d'Outre Mer (NUTS 1 level) with the NUTS 2 level regions Martinique, Guadeloupe and Guyane have not been considered. Whilst those are part of France, we understand those do not belong to the Atlantic Arc but rather to the Caribbean.

EU Member State	NUTS 1	NUTS 2	Geographical allocation to Sea-basin (NUTS 2 regions)
	Sur	Andalusia	Mediterranean Sea
		Region of Murcia	Mediterranean Sea
		Ceuta	Mediterranean Sea
		Melilla	Mediterranean Sea
	Canarias	<i>Canary Islands</i> ⁷	Atlantic
Portugal	Continental Portugal (except for Açores and Madeira) ⁸	Norte	Atlantic Arc
		Algarve	Atlantic Arc
		Centro	Atlantic Arc
		Lisboa	Atlantic Arc
		Alentejo	Atlantic Arc
	Acores and Madeira ⁹	<i>Região Autónoma dos Açores</i>	Atlantic Arc
		<i>Região Autónoma da Madeira</i>	Atlantic Arc
UK	North East England	Tees Valeey and Durham	North Sea
		Northumberland and Tyne and Wear	North Sea
	North West England	Cumbria	Atlantic Arc
		Cheshire	Atlantic Arc
		Lancashire	Atlantic Arc
		Merseyside	Atlantic Arc
	Yorkshire and the Humber, England	North Yorkshire	North Sea
		East Riding and North Lincolnshire	North Sea
	East Midlands	Lincolnshire	North Sea
	East of England	East Anglia	North Sea
		Essex	North Sea
	South East England	Surrey, East and West Sussex	North Sea
		Hampshire and Isle of Wight	North Sea
		Kent	North Sea
	South West England ¹⁰	Gloucestershire, Wiltshire and	Atlantic Arc

⁷ The Canary Islands (NUTS 2) will be assessed separately from the other NUTS 2 regions in Spain, due to the specific nature of the maritime economic activities and indicators.

⁸ Formally not a NUTS 1 classification. Figures refer back to to the NUTS 1 figure for Portugal minus the figures for Acores and Madeira.

⁹ This is formally not a NUTS 1 classification but is done to distinguish the island regions from the continent of Portugal. It needs to be build up from two NUTS 2 regions.

EU Member State	NUTS 1	NUTS 2	Geographical allocation to Sea-basin (NUTS 2 regions)
		Bristol/Bath area	
		Dorset and Somerset	Atlantic Arc/North Sea
		Cornwall and Isles of Scilly	Atlantic Arc/North Sea
		Devon	Atlantic Arc/North Sea
	Scotland	Eastern Scotland	North Sea
		North Eastern Scotland	North Sea
		South Western Scotland	Atlantic Arc
		Highlands and Islands	Atlantic Arc
	Wales	West Wales and the Valleys	Atlantic Arc
		East Wales	Atlantic Arc
	Northern Ireland	Northern Ireland	Atlantic Arc

This task consists of two main tables collating information related to **employment (table 4)** and **GVA (table 5) per maritime economic activities per region**. The results of this analysis are twofold:

- 1) to **provide a breakdown of maritime economic activities at regional level** and to assess maritime regions and
- 2) to feed into the overall **allocation of the maritime economic activities to different sea-basins** via the regional breakdown.

The same approach, applied in chapter 1 is applied for gathering and presenting relevant information on GVA and number of persons employed per economic activity. In cases in which a split per region can not be quantified by the means applied in chapter 1, then the split will be based on the knowledge and expert opinion of the country expert. If a split cannot be made, the regions are indicated that are clearly dominant complemented by the argument behind this assessment.

Please report in **Annex II of the country fiche any qualitative finding as to how the breakdown is achieved**.

¹⁰ For the NUTS 2 level regions Dorset and Somerset, Cornwall and Isles of Scilly as well as Devon, we will use a workable split according to the sea-basin (of 50/50 split in both sea-basins, unless a clear rationale can be provided for a different allocation, e.g. a large port on one of the sea-basins etc.).



Table 4 - Overview of employment per maritime economic activity per region in a MS (example for FR)^{11 12}

Please see Annex II for a description of the sea-basin specific allocation.

¹¹ Note to MARE: For each other country a separate table will be prepared (IE, PT, ES, UK) in line with agreements made at the kick-off meeting regarding allocation of regions.

¹² Under **'Others'** those regions (and the respective breakdown) in a given EU Member State are listed which are not sea-adjacent.

Sea-basin		Atlantic Arc							Mediterranean Sea-basin			North-Sea basin	Other (non-maritime regions in your country)
Employment (number of people in 1,000)		Haute Normandie	Basse Normandie	Picardie	Pays de la Loire	Bretagne	Poitou-Charentes	Aquitaine	Languedoc-Roussillon	Provence Alpes Cote d'Azur	Corse	Nord-Pas de Calais	
0.	Shipbuilding												
0.1	Shipbuilding (excl. leisure boats) and ship repair												
0.2	Construction of water projects												
1.	Maritime transport and shipbuilding												
1.1	Deep-sea shipping												
1.2	Short-sea shipping (incl. Ro-Ro)												
1.3	Passenger ferry services												
1.4	Inland waterway transport												
2.	Food, nutrition, health and eco-system services												
2.1	Catching fish for human consumption												
2.2	Catching fish for animal feeding												
2.3	Marine aquatic products												
2.4	Blue biotechnology												
2.5	Agriculture on saline soils												
3.	Energy and raw materials												
3.1	Offshore oil and gas												
3.2	Offshore wind												
3.3	Ocean renewable												

Sea-basin	Atlantic Arc							Mediterranean Sea-basin			North-Sea basin	Other (non-maritime regions in your country)
Employment (number of people in 1,000)	Haute Normandie	Basse Normandie	Picardie	Pays de la Loire	Bretagne	Poitou-Charentes	Aquitaine	Languedoc-Roussillon	Provence Alpes Cote d'Azur	Corse	Nord-Pas de Calais	
	energy											
3.4	Carbon capture and storage											
3.5	Aggregates mining (sand, gravel, etc.)											
3.6	Marine minerals mining											
3.7	Securing fresh water supply (desalination)											
4.	Leisure, working and living											
4.1	Coastal tourism											
4.2	Yachting and marinas											
4.3	Cruise tourism											
5.	Coastal protection											
5.1	Protection against flooding and erosion, preventing salt water intrusion, protection of habitats											
6.	Maritime monitoring and surveillance											
6.1/6.2	Traceability and security of goods supply chains, prevention and protection against illegal movement of people and goods,											
6.3	environmental											

Sea-basin	Atlantic Arc							Mediterranean Sea-basin			North-Sea basin	Other (non-maritime regions in your country)
Employment (number of people in 1,000)	Haute Normandie	Basse Normandie	Picardie	Pays de la Loire	Bretagne	Poitou-Charentes	Aquitaine	Languedoc-Roussillon	Provence Alpes Cote d'Azur	Corse	Nord-Pas de Calais	
	monitoring											
Total												



Table 5 - Overview of GVA per maritime economic activity per region in a MS (for FR)^{13 14}

Please see Annex II for a description of the sea-basin specific allocation.

¹³ Note to MARE: For each other country a separate table will be prepared (IE, PT, ES, UK) in line with agreements made at the kick-off meeting regarding allocation of regions.

¹⁴ Under 'Others' those regions (and the respective breakdown) in a given EU Member State are listed which are not sea-adjacent.

Sea-basin		Atlantic Arc						Mediterranean Sea-basin			North-Sea basin	Other (non-maritime regions in your country)
GVA (in €)		Haute Normandie	Picardie	Pays de la Loire	Bretagne	Poitou-Charentes	Aquitaine	Languedoc-Roussillon	Provence Alpes Cote d'Azur	Corse	Nord-Pas de Calais	
0.	Shipbuilding											
0.1	Shipbuilding (excl. leisure boats) and ship repair											
0.2	Construction of water projects											
1.	Maritime transport and shipbuilding											
1.1	Deep-sea shipping											
1.2	Short-sea shipping (incl. Ro-Ro)											
1.3	Passenger ferry services											
1.4	Inland waterway transport											
2.	Food, nutrition, health and eco-system services											
2.1	Catching fish for human consumption											
2.2	Catching fish for animal feeding											
2.3	Marine aquatic products											
2.4	Blue biotechnology											
2.5	Agriculture on saline soils											
3.	Energy and raw materials											
3.1	Offshore oil and gas											
3.2	Offshore wind											
3.3	Ocean renewable											

Sea-basin	Atlantic Arc						Mediterranean Sea-basin			North-Sea basin	Other (non-maritime regions in your country)
GVA (in €)	Haute Normandie	Picardie	Pays de la Loire	Bretagne	Poitou-Charentes	Aquitaine	Languedoc-Roussillon	Provence Alpes Cote d'Azur	Corse	Nord-Pas de Calais	
	energy										
3.4	Carbon capture and storage										
3.5	Aggregates mining (sand, gravel, etc.)										
3.6	Marine minerals mining										
3.7	Securing fresh water supply (desalination)										
4.	Leisure, working and living										
4.1	Coastal tourism										
4.2	Yachting and marinas										
4.3	Cruise tourism										
5.	Coastal protection										
5.1	Protection against flooding and erosion, preventing salt water intrusion, protection of habitats										
6.	Maritime monitoring and surveillance										
6.1/6.2	Traceability and security of goods supply chains, prevention and protection against illegal movement of people and goods,										
6.3	environmental										

Sea-basin	Atlantic Arc						Mediterranean Sea-basin			North-Sea basin	Other (non-maritime regions in your country)
GVA (in €)	Haute Normandie	Picardie	Pays de la Loire	Bretagne	Poitou-Charentes	Aquitaine	Languedoc-Roussillon	Provence Alpes Cote d'Azur	Corse	Nord-Pas de Calais	
	monitoring										
Total											

2. Listing of the 7 largest, fastest growing and most promising marine and maritime economic activities

The following sections are aligned 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 most promising prospective maritime economic activities at NUTS 0 level is provided. This part of the study relies on statistical information gathered and supplemented with the insights of the sector experts and the country expert.

2.1. Listing and ranking the largest marine and maritime economic activities

This subchapter identifies the largest maritime economic activities with a ranking order. On the basis of the scores obtained¹⁵ in relation to GVA and persons employed, the 7 largest maritime economic activities have been identified as follows:

Table 6 – Listing the 7 largest maritime economic activities in a MS at NUTS-0 level

Rank	Maritime economic activities	GVA (million EUR)	Employment (*1000)	Score
1.	..			
2.	..			
3.	..			
4.				
5.				
6.				
7.				

2.2. Ranking order for the 7 fastest growing marine and maritime economic activities over the 3 past years

This subchapter identifies and selects the 7 fastest growing maritime economic activities as emerged **over the past 3 years**. This part of the analysis is essential for forecasting future trends. The analysis entails the aggregation and assessment of quantitative data for the maritime economic activities, applying the same approach as in the previous task. on statistical information gathered supplemented with the insights of the sector experts and the country experts where applicable.

¹⁵ Please refer to the country fiche manual

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

Rank	Maritime economic activities	GVA (CAGR)	Employment (CAGR)	Score
1.	...			
2.	...			
3.	...			
4.	...			
5.	...			
6.	...			
7.	...			

Brief explanation of the results of the ranking:

Information (in descriptive or table format) on the **compound annual growth rate (CAGR)** for the **27** maritime economic activities **over the last 3 years**.

2.3. Ranking order of the 7 most promising marine and maritime economic activities

This subchapter identifies the most promising economic activities which have a perspective and promising growth potential, where future investments and projects could focus. A two-step approach is taken:

- Table 8 presents the scoring of all maritime economic activities (at NUTS 1 or 0 level) alongside the indicators identified in the initial Blue Growth study.¹⁶
- Table 9 suggests the ranking order for the 7 most promising maritime economic activities

¹⁶ Ecorys, Deltares, Océanique Développement, 2012: Drivers and Scenarios for Sustainable Growth from the Oceans, Seas and Coasts. Blue Growth Final Report. Annex I. Maritime economic activities data. Available here: <https://webgate.ec.europa.eu/maritimeforum/content/2946>

The identification of the 7 most promising maritime economic activities is a result of expert evaluation, which is based on data and information derived from the previous sections, and combined with a number of key external drivers which will determine their importance in the future¹⁷.

Table 8 - Future potential of economic activities

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

The last column summarises the final score in terms of number of positive/negative judgements:

- "0" and "-" will have the effect of annulling "+" (e.g.: in the same row: ++++ and - and 0 will give the final score of ++).
- "?" will not affect the final score.

Table 9 - Ranking order of the 7 most promising maritime economic activities in a MS at NUTS-0 level

Rank	Maritime economic activities	Score (applying formula)
1.	...	
2.	...	

3.	...	
4.		
5.		
6.		
7.		

Brief explanation of the results of the ranking:

3. Identification of the most innovative components of Blue Growth

3.1. Assess the innovation score of the maritime economic activities / sectors

This chapter assesses the innovation scores of each of the maritime economic activities¹⁸ in the country. The innovation indicators are based on the EU Innovation Scoreboard (EUIS) 2013. If other innovation indicators are found more relevant for this country¹⁹, these are suggested and completed in table 10. Besides, the rationale for using them is explained beneath.

Whenever available, quantitative scores for each of the maritime economic activity are used. If not available, ranking scores which present the rank/order of the different maritime economic activities (1 = highest rank) are applied.²⁰

¹⁸ If thought to be more suitable, this task can be done on the level of sectors than on maritime economic sectors (value chain approach).

¹⁹ e.g. since these have been found through the secondary country literature review (see chapter 1).

²⁰ e.g. a ranking score of 1 means that the particular sector scores highest on the indicator in comparison to the other economic activities.

Table 10 – Scoring of the maritime economic activities on innovation criteria²¹

	Innovation Union Scoreboard indicators	Maritime economic activity 1	Maritime economic activity 2				
1	R&D expenditure as percentage of sales/turnover						
2	Percentage of employees having higher level education ²²						
3	No of publications in MEA and rank in Europe/worldwide						
4	No of patents in MAE and rank in Europe/worldwide						
5	Other innovation criteria proposed (and scoring)						
Maritime economic activity / sector innovation score							

²¹ Where available, the quantitative score will be supplied by the central data team.

²² As a working definition, this would comprise all those that have a university degree or one equal to university (university of applied sciences) as opposed to vocational trainees and manual workers (“blue collar” workers).

3.2. Assessment of innovation reports compiled at national level

Any **national studies** that contain information **on innovation potential per sector/maritime economic activity** are listed beneath. A qualitative assessment of these reports is provided beneath.

Table 11 – List of pre-identified national maritime sector analysis

Source	Qualitative assessment regarding innovation potential per maritime economic activity/sector

Based on the above quantitative and qualitative information an assessment is made of the 7 most innovative maritime economic activities.

Table 12 - Ranking order of the 7 most innovative maritime economic activities in a MS at NUTS-0 level

Rank	Maritime economic activities
1.	...
2.	...
3.	...
4.	
5.	
6.	
7.	

4. Identification and analysis of maritime clusters

This section identifies the key Blue Growth clusters²³ in the Member State and describes their economic activities. For countries that pertain to multiple sea-basins, this includes also clusters located in other sea-basins, e.g. the Mediterranean (FR, ES) and the North Sea (UK, FR). Those clusters identified in the Blue Growth study are updated, with a view of verifying the pre-identified ones²⁴ and adding further clusters (if appropriate and relevant).

It also aims at assessing the maturity of the cluster (mature, growing or early development). It builds further on the regional allocation of economic activities as described under section 1.2 of the country fiche.

The clusters are analysed according to the following aspects (table 13):

1. Identification of existing clusters/updating the list in the 2012 Blue Growth study;
2. Identifying of maritime economic activities in the cluster and indicate the mixture and composition of the cluster activities in terms of their development stage (mature, growing, early development);
3. Assessment of strengths and weaknesses (feeding in to the overall SWOT analysis on the sea-basin level which will be part of the final report).

In addition to that, the identified clusters should be analysed according to the following indicators (table 14):

4. Number of students in higher education;
5. Number of students in higher education following courses specially designed for employment in the blue economy
6. Unemployment rate in the cluster
7. On-going research in a given cluster, i.e. number of on-going research programmes and projects in the cluster, regionalised patent & publications data (where available at cluster level), R&D test centres located in the cluster etc.

²³ Clusters are defined as "geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition (e.g. suppliers, customers, companies which share inputs, but also governments and other institutions such as universities and trade associations." (M.E. Porter (1998) "Clusters and the New Economics of Competition" Harvard Business Review, Nov/Dec. p.78.). In the context of Blue Growth and taking reference to the Blue Growth Study 2012, we define maritime clusters as geographical concentrations of maritime economic activities that are (inter-)linked.

²⁴ In the previous Blue Growth studies, these were: UK: Scottish West Coast, South West England, Aberdeen, Solent, London Gateway; IE: Galway/Western Ireland (see also case study Blue Growth – Annex 5 maritime clusters); FR: Bretagne, Brest, Marseilles, ES: Galician Coast, Barcelona;

Table 13 - List and strengths and weaknesses of clusters

	EU Member State	Maritime economic activities concerned	Status (mature, growing, early development)	Strengths	Weaknesses
Cluster 1					
Cluster 2					

Table 14 – In-depth analysis of clusters

	EU Member State	Maritime economic activities concerned	Education policy		Unemployment rate at cluster level ²⁵ (NUTS III or II level)	Ongoing research: main research institutes / companies associated to the clusters
			Number of students in higher education	Number of students in higher education following courses for employment in blue economy		
Cluster 1						
Cluster 2						

²⁵ Where available data exists, this should be provided at NUTS 3 level. However, if not available, a NUTS 2 data are gathered. The breakdown on cluster level will be provided and the rationale provided.

List of **specific regional or national cluster strategy** in place

Table 15 – Regional or national cluster strategy

<u>Regional or national cluster strategy</u>	<u>Brief description of main objectives and features</u>

5. Analysis of measures, policies and strategies to stimulate growth and good practices in the sea-basin

The policy evaluation beneath is carried out at national level - NUTS 0, 1 or regional level NUTS 2 (depending on the individual level on which the maritime policy decision-making competency is residing)²⁶

The evaluation assesses policies at national, regional and EU level including those that are perceived to favour sustainable maritime growth. Besides, the rationale on what renders such measures effective will be provided (see table 16), focusing on legal/regulatory or financial measures.

The analysis is comprised of two interlinked analysis:

Table 16 provides an overview of maritime policies (national, regional and EU level) and assesses their impact.

Table 17 concludes with good practices derived from these maritime and generic policies. It identifies examples of good practice in one or more Member States that other countries and regions can follow. IT is completed based on the assessment of the country expert with overall supervision of the core team of the study.

Table 16 – Assessment of maritime and generic policies

Policy	Objectives	Priorities	Consequences for maritime activities	Impacts on sustainable growth	Investment and funding	Other generic policies with high impact on maritime economic activities
Policy 1						
Policy 2						
...						

The following evidence indicators to identify successful good practices will be analysed depending on the specific context of the individual good practice identified.²⁷ The assessment presents an expert opinion as to how far the targets and the objectives of the particular good practice have been met and in how far those have been met.

Table 17 Assessment of good practices derived

Good practice	Evidence for impact 1	Evidence for impact 2	Evidence for impact 3	Assessment
Good practice 1				
Good practice 2				
...				

²⁶ We understand this might differ for specific policies. See also table 3 of this country fiche.

²⁷ Provided that data is available to identify indicators of success of the good practice (evidence for impact).

Annex I – Detailed description of the sources and the methodology on maritime economic activities

The following table refers to section 1.1 Overview of relevant maritime economic activities in a Member State (table 1). It will provide the table with the relevant figures sourced from Eurostat, Official national statistical sources or alternative sources (as indicated by the columns of table 1). Detailed reference regarding the sources of the data will complement the data.

In order to complete table 1, the figures considered to be the most reliable and up-to-date reflection of the GVA and employment status of the specific maritime economic activity will be highlighted in bold. The judgement is based on the country expert with feedback from the core team.

Table 18 – Selection table of the most relevant figures and detailed references

		Eurostat			Official National Statistical Sources			Alternative sources (outside official statistics)			Other indicators				
Maritime economic activity		GVA (EUR, million)	Employment	Source & Reference year	GVA (EUR, million)	Employment	Source & Reference year	GVA (EUR, million)	Employment	Source & Reference year	Enterprises	SMEs	Further indicators	Source & reference year + notes	Split private vs. public allocation
0. Shipbuilding															
0.1	Shipbuilding (excl. leisure boats) and ship repair														
0.2	Construction of water projects														
1. Maritime transport															
1.1	Deep-sea shipping														
1.2	Short-sea shipping (incl. Ro-Ro)														
1.3	Passenger ferry services														
1.4	Inland waterway transport														
2. Food, nutrition, health and eco-system services															
2.1	Catching fish for human consumption														
2.2	Catching fish for animal feeding														
2.3	Marine aquatic														

		Eurostat			Official National Statistical Sources			Alternative sources (outside official statistics)			Other indicators				
Maritime economic activity		GVA (EUR, million)	Employment	Source & Reference year	GVA (EUR, million)	Employment	Source & Reference year	GVA (EUR, million)	Employment	Source & Reference year	Enterprises	SMEs	Further indicators	Source & reference year + notes	Split private vs. public allocation
	products														
2.4	Blue biotechnology														
2.5	Agriculture on saline soils														
3. Energy and raw materials															
3.1	Offshore oil and gas														
3.2	Offshore wind														
3.3	Ocean renewable energy														
3.4	Carbon capture and storage														
3.5	Aggregates mining (sand, gravel, etc.)														
3.6	Marine minerals mining														
3.7	Securing fresh water supply (desalination)														
4. Leisure, working and living															
4.1	Coastal tourism														

		Eurostat			Official National Statistical Sources			Alternative sources (outside official statistics)			Other indicators				
Maritime economic activity		GVA (EUR, million)	Employment	Source & Reference year	GVA (EUR, million)	Employment	Source & Reference year	GVA (EUR, million)	Employment	Source & Reference year	Enterprises	SMEs	Further indicators	Source & reference year + notes	Split private vs. public allocation
4.2	Yachting and marinas														
4.3	Cruise tourism														
5. Coastal protection															
5.1	Protection against flooding and erosion, preventing salt water intrusion, protection of habitats														
6. Maritime monitoring and surveillance															
6.1/6.2	Traceability and security of goods supply chains, prevention and protection against illegal movement of people and goods,														
6.3	environmental monitoring														

		Eurostat			Official National Statistical Sources			Alternative sources (outside official statistics)			Other indicators				
Maritime economic activity		GVA (EUR, million)	Employment	Source & Reference year	GVA (EUR, million)	Employment	Source & Reference year	GVA (EUR, million)	Employment	Source & Reference year	Enterprises	SMEs	Further indicators	Source & reference year + notes	Split private vs. public allocation
Total															

Annex II – Detailed description of the regional breakdown per country

This Annex aims at providing more room to justify the breakdown in a qualitative way. Hence, the qualitative description of the split (see right column) provides room for further clarification. It refers to table 3 (breakdown of maritime economic activities at regional level).

Table 19 – qualitative description of the regional breakdown

Sea-basin		Atlantic Arc							Mediterranean Sea-basin			North-Sea basin	Other	Qualitative description of the split
Employment (number of people in 1,000)		Haute Normandie	Basse Normandie	Picardie	Pays de la Loire	Bretagne	Poitou-Charentes	Aquitaine	Languedoc-Roussillon	Provence Alpes Cote d'Azur	Corse	Nord-Pas de Calais		
0.	Shipbuilding													
0.1	Shipbuilding (excl. leisure boats) and ship repair													
0.2	Construction of water projects													
1.	Maritime transport and shipbuilding													
1.1	Deep-sea shipping													
1.2	Short-sea shipping (incl. Ro-Ro)													
1.3	Passenger ferry services													
1.4	Inland waterway transport													
2.	Food, nutrition, health and eco-system services													
2.1	Catching fish for human consumption													
2.2	Catching fish for animal feeding													
2.3	Marine aquatic products													
2.4	Blue biotechnology													
2.5	Agriculture on saline soils													
3.	Energy and raw materials													
3.1	Offshore oil and gas													
3.2	Offshore wind													
3.3	Ocean renewable													

	energy												
3.4	Carbon capture and storage												
3.5	Aggregates mining (sand, gravel, etc.)												
3.6	Marine minerals mining												
3.7	Securing fresh water supply (desalination)												
4.	Leisure, working and living												
4.1	Coastal tourism												
4.2	Yachting and marinas												
4.3	Cruise tourism												
5.	Coastal protection												
5.1	Protection against flooding and erosion, preventing salt water intrusion, protection of habitats												
6.	Maritime monitoring and surveillance												
6.1/6.2	Traceability and security of goods supply chains, prevention and protection against illegal movement of people and goods,												
6.3	environmental monitoring												
Total													