DG Maritime Affairs and Fisheries, Study on Deepening Understanding of Potential Blue Growth in the EU Member States on Europe's Atlantic Arc, Interim Country Fiche PORTUGAL, 31st July 2013

Directorate General for Maritime Policy (DGPM), 07.10.2013

1. General comments and considerations

First of all we congratulate the efforts made by the team for this work in the Atlantic Area. We **agree with the structure** of the document and, in general, **with the comments made by the Commission** on the document for Portugal Maritime Activities[1].

Portugal has a National Ocean Strategy 2013-2020[2], supported by a characterization of the sea economy (Annex A of the Strategy). So, our comments on the present document – marine and maritime sectorial choices, economic quantitative and qualitative characterization, list of the fast growing activities, and identification of the most innovative components - will be based mainly in the National Ocean Strategy and in the detailed document on "The sea economy in Portugal"[3] that supports it. Other recent national reports related with the ocean economy were also considered when appropriate, namely the COTEC Portugal Blue Growth for Portugal[4] and the Oceano XXI Challenges of the Ocean 2020[5]. We also took into consideration some sectorial documents whenever necessary to justify our comments as well as the opinion of the experts from the National Atlantic Forum. We received a number of interesting comments from Directorate General for Natural Resources, Safety and Maritime Services (DGRM), Nature and Forests Conservation Institute (ICNF), Directorate-General for Geology and Energy (DGEG), Lisbon and Tagus Valley Regional Coordination and Development Commission (CCDRVLT), Regional Directorate for Sea Affairs /Government of the Azores (DRAM/GRA). The analysis should have in mind the value chain whenever possible, as well as the clusters perspective.

It's very important to have a good starting point to define and characterize the sea economy. For that, we have **some methodological suggestions**. At the national level we are working with the National Institute of Statistics **to make a pilot of a Satellite Account for the Ocean,** within the National Accounts. So, a detailed analysis of the NACE[6] codes and CN[7] codes for the products of the sea is in course. For that purpose we are considering and comparing several

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[1] EC, Comments on country paper for Portugal, 12th August 2013 and EC, Comments on country papers for France, Portugal and Spain, 6th August 2013

[2] Government of Portugal/ Ministry of Agriculture and Sea, National Ocean Strategy 2013-2020, March 2013 version

[3] Directorate-General for Maritime Policy, The Sea Economy in Portugal, December 2012 (document to support the National Ocean Strategy)

[4] COTEC Portugal, Blue Growth for Portugal, November 2012

[5] Oceano XXI, Desafios do Mar 2020. Estratégias de Eficiência Coletiva, Maio 2013

[6] NACE - Statistical Classification of Economic Activities in the European Community

[7] CN - Combined Nomenclature - goods nomenclature of the external trade statistics of the European Union

international methodological documents such as the DGMARE Blue Growth[8], the **Marine Strategy Framework Directive** guidelines[9] and, above all, as our main reference, the Eurostat **Study in the field of maritime policy[10]**. This monitoring instrument, as well as a set of indicators that are being selected, will be of strategic relevance to monitor the National Ocean Strategy.

A common methodology for the key sectors, such as identified in the DGMARE Blue Growth[8], is a powerful and determinant tool to compare the blue growth among different countries. Nevertheless, as it was also mentioned in the same report, Input/Output Tables might be a useful tool for a more detailed level of analysis. In that regard the development of a Satellite Account for the Ocean can be very helpful, for further improvements.

The work that is being done for the Blue Growth in the Atlantic Area is an excellent starting point for a common base. At the same time, we believe it's useful that each country follows its own criteria, that best fits their own specificities. In order to assure comparability and integration, it is crucial to ensure transparency and coherence between the different assumptions and methodologies. That will allow interactions and exchange of best practices, for future common improvements.

We think **the document should be improved in what concerns NUTS-0 level quantitative analysis**. The source of information should be the same for all activities for comparison purposes (EUROSTAT or National Accounts), although other sources could be used when splitting is necessary. Several times along the document National Statistics Institute (INE) is mentioned as the main source of information. That should be corrected to "Statistics Portugal (INE)", but it will be important to mention the source document as well (National Accounts?). We find out that, in some case, such as Maritime transport or Catching fish for human consumption, the figures seams unreliable (see detailed comments ahead). We also propose a slightly different NACE aggregation, in some cases (see detailed comments ahead).

We also find that **some activities are missing**, such as **Maritime equipment** (such as ICTs, robotics, etc.) and **Maritime services** (such as insurance, consulting, etc…). Although we understand specific data is not easily available for this activities, regarding the sea, we propose to add them.

We also propose a change in title of the activity "Food, nutrition, health and eco-system services". We think **"Eco-system services" should be individualized**, for future development in economic analysis, horizontal to the whole economy and not only related with food, nutrition and health (it concerns also tourism, coastal protection, and others). The Blue Growth agenda and the opportunities it provides for growth and jobs are of overwhelming importance taking into account the EU's Integrated Maritime Policy (IMP). The role of the MSFD as the

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[8] Ecorys, Deltares, Oceanic, Blue Growth Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coasts. Annex 1 Maritime economic activities data, 13 July 2012

[9] MSFD, Guidance for 2012 reporting under the Marine Strategy Framework Directive, using the MSFD database tool, Version 1.0, July 2012

[10] EUROSTAT, Study in the field of maritime policy, 2009

environmental pillar of the IMP is of the utmost relevance. We must highlight the discussion of Ministers at the Environment Council of 18 June that focused on "Blue Growth" and how to ensure the sustainable development of marine waters, by looking at the status of implementation of the MSFD and integration of marine environmental concerns through other EU initiatives – the EU Strategy on Adaptation to Climate Change and the Commission's proposal for a Directive on Maritime Spatial Planning and Integrated Coastal Management. MAES is an opportunity to demonstrate the benefits of achieving GES in terms of benefits not only to the environment but also to society and the economy. This is very timely since by 2015 MS have to develop their programmes of measures needed to achieve GES and safeguard some services. A joint work programme will be fixed up to 2020 at the EU Nature and Marine Directors meeting in December 2013 under Lithuanian Council Presidency.

For the **qualitative review of maritime economic activities**, some sentences could be improved in order to be more accurate with Portuguese reality (see detailed comments ahead).

Regarding the **breakdown of maritime economic activities at regional level (NUTS 1 or NUTS 2)** the criteria and sources are missing (how was the splitting by region done? With GVA? With Employment? Using what sources? "Estatísticas das Empresas"? We don't agree with the use of the same criteria for GVA and Employment, as it can be substantially different for most activities; INE has disaggregated data for GVA and Employment in "Estatísticas das Empresas", that can be used for splitting purposes.

We are not very comfortable with the results included in chapter 2 Tables - Listing of the **7 largest, fastest growing and most promising marine and maritime economic activities**. Some figures are inaccurate and need improvement or best explanations (see detailed comments ahead).

In what concerns the **future potential of economic activities**, the analysis is too subjective (Table 6). It would be interesting to know the list of national experts included in this judgment. We don't agree with the classification of "-" in "Innovativeness" and "competitiveness" for "Shipbuilding" and "Catching fish for human consumption"; we cannot agreed with zero for coastal protection; maritime monitoring and surveillance with just one +, when we have a big area to monitor according the Marine Strategy Framework Directive. We have potential in information and communication technologies and robotics that are essential for these last sectors (see detailed comments ahead)

Regarding Table 8 on **scoring of the maritime economic activities on innovation criteria**, were indicated 23 maritime economic activities, but it was only presented scoring information, on innovation criteria, in 9 of them, so this table is considered to be incomplete and limited. Maybe it should be rethinked.

2. Detailed comments

Detailed comments on the Country Fiche PORTUGAL, 31st July, are in the table below. We took into consideration the European Commission comments[1] as well.

Page	Country Fiche PORTUGAL	Comments / Suggestions
0. General Overview		
0.1 Country overview		
1	Paragraph 3 - *The main economic sectors in Portugal are […]. The tertiary sector is characterised by financial, insurance and Real Estate activities.*	Comment 1– In the tertiary sector it's also very important all the tourism related activities as well as consulting and engineering activities (business services) Suggestion – *The tertiary sector is characterized by **tourism related activities, consulting and engineering activities (firms services),** financial, insurance and Real Estate activities.* Comment 2 - It lacks a reference to the primary sector. In particular fisheries.
0.2 Coastal regions		
	The whole chapter	Comment - References to the figures should be more precise (ex: Statistics national Institute, Portugal…which document, year, etc).
1	Paragraph 1 – *Portugal has a long coastline: it approximately measures 1,860 km, thus including the continental territory (943km) and the archipelagos of Açores (667km) and Madeira (250km).₃ In total, this represents 2.7% of the total EU coastline₄. Besides, the country has one of the largest Economic Exclusive Zone (EEZ) in Europe covering more than 1,700,000 Km₂ (equal to more than 18 times the Country's territorial space).*	Comment 1– EC comments on country paper for Portugal suggest this paragraph fits better in the country overview. We think it fits in any of the items indifferently. Comment 2 – The figure 667km is incorrect. The azorean coastline is about 1019 km (http://siaram.azores.gov.pt/geografia/_informacao-generica.html) . Suggestion – to correct the figure for Azores and to add text as follows: […]*and the archipelagos of Açores **(1019km)** and Madeira (250km).3 In total, this represents 2.7% of the total EU coastline4. Besides, the country has one of the largest Economic Exclusive Zone (EEZ) in Europe covering more than 1,700,000 Km^2 (equal to more than 18 times the Country's territorial space **due especially to the Azores EEZ sub-area, with about 1,000,000 km^2).***
2	Paragraph 2 - *From a Geographical perspective[…] specialising in the following sectors: agro-*	Comment 1– EC comments on country paper for Portugal refers there is not much on maritime. We agree. Suggestion 1– To add the following text: ***The country as a whole had a positive performance in coastal and nautical tourism, including yachting and marinas and cruise***

	food, chemistry, heavy mechanical engineering, electric and electronic equipment, automotive and ship repair.	***tourism, with an increase in the recent years, both in GVA and employment, despite the economic crisis**. It also **improves in what concerns renewable energies, including off-shore (two examples are: the Windfloat, a demonstration wind off-shore project, and the Waveroller, a wave energy prototype. Ports activity have also increase in recent years, particularly the cargo movements in the Leixões Port in "Zona Norte" (12,3% increase from 2009 to 2011), in the Lisbon Port in "Lisboa" (2,9% increase from 2009 to 2011, and in Sines Port in "Alentejo" (1,1% increase from 2009 to 2011)*** *(DGPM, The sea economy in Portugal, 2012).* Comment 2 – Regarding the geographical perspective, the remarks on the economic perspectives on the regions, further analysis in our national group is in course, jointly with the analysis of the "Methodology Note Selection Maritime Clusters, 18th September)
2	Paragraph 4 – "*An important issue in Portugal is the overexploitation of fishery resources, as a consequence of multiple factors, including the loss of potential in high sea fisheries, increased efficacy of gear devices and operational methods. In return, an accelerated ….the total fish production. The urgency to preserve…for the country".*	Comment - Can the authors provide literature with empirical evidence that "An important issue in Portugal is the overexploitation of fishery resources"? Suggestion – Replace the whole sentence by: ***The decrease in the abundance of the main commercial resources, and loss of fishing opportunities in areas traditionally operated by the fleet, have conditioned a more favorable evolution of commercial fishing. The urgency to preserve the existing resources, along with the need to safeguard the economic viability of the fishing industry is a major priority for the country.***
1. Marine and maritime economic activities		
1.1. Overview of relevant maritime economic activities in a Member State		
Quantitative overview of maritime economic activities – Table 1 (and Annex I – Table 12, Annex II – Table 13 and Annex III – Table 14)		
3	Paragraph 2, Bullet 1	Comment 1 – When mentioning Official national statistics, or INE, the correct designation should always be "Statistics Portugal" or INE. Regarding the sources, we think it's very important, for comparison purposes, that statistical information should be from the same sources/ methodology for all countries, which means National Accounts (EUROSTAT or Statistics Portugal). Nevertheless, and always in a complementary way, in areas not covered by National Accounts, such as eco-systems characterization, we suggested that the authors

		may also include other data sources. It is also suggested that the authors try to include peer reviewed literature, when possible.
4/5	Table 1	Comment 1- GVA and Employment - we think the source of information should be the same for all activities for comparison purposes (EUROSTAT or National Accounts), although other sources could be used when splitting is necessary); - row 0.2 Construction of water projects, see if this figures (NACE 42.91 according to table 14) fits better on "Coastal protection", which would imply the elimination of this item/row. - rows 1.1. Deep-sea shipping and 1.2.Short-sea shipping, doesn't explain how you split data for these two areas; - whole set of rows for maritime transport (1.1, 1.2, 1.3 an 1.4) –the figures are too low; it seams that figures for NACE 52.10, 52.22 and 52.24 – ports activitiy, mentioned in table 14 – are not included!); - row 1.4. Inland waterway transport - How much does this "minimal" stands for? considering that no enterprises were recorded. - rows 2.1. Catching fish for human consumption and 2.2. Catching fish for animal feeding doesn't explain how to split data for this two areas; - row 2.3. Marine aquatic products, we don't understand why use JRC data instead of EUROSTAT or Nacional Accounts; correct the source "Estatísticas da Pesca"; - row 2.5. Agriculture and saline soils, doesn't explain how you split data from agriculture as a whole; the numbers seams very high; - row 3.1. Offshore oil and gas - It is suggested that zeros are used carefully. Does zero mean really zero? if so, how to explain that one enterprise has zero employees and stands for zero GVA? Could it be <1? or n/a? - row 3.3 Ocean renewable energy - How much is minimal? - row 4.1. Coastal tourism, doesn´t explain if you consider all the country or only the coastal area/ which criteria; we think a broader number of activities/ NACE, should be considered (see comments on Annex III); - row 4.2. Yachting and marinas, there are activities/ NACE that can be identified with this item (see comments on Annex III); - row 4.3. Cruise tourism , splited in two rows with low and high estimates from EUROSTAT and European Cruise Council; the numbers are very different as well

| | | as from the ones of the national accounts for passenger transportation;
- row 5.1 Coastal protection, see if data from row 0.2 Construction of water projects, fits better here;
- Comment 2 – Number of enterprises - Table 1, column "Sources for number of enterprises", refers several sources for each item/ marine economic activity for the majority of them (ex: 2.1. Catching fish for human consumption). Apparently you sum the number of enterprises from several sources, which may be not reliable. There is a need to confirm if there is no duplications.
- rows 2.1. Catching fish for human consumption and 2.2. Catching fish for animal feeding - are there any possibility that some overlap exists between these two figures: human consumption and animal feeding?
- row 2.5 Agriculture on saline soils - Considering the figures that are presented for the GVA and Employment, an explanation should be made to understand how much enterprises exist on this activity and which NACE were considered. From where come these figures? Anyway this figures should be restricted to the sea activities.
Comment 3 – Employment column, the unit is missing.
Comment 4 – Others
- row 2.4 – Blue biotechnology – Public/private driven - Most of the pilot studies have been made by universities and supported by governments, either directly of through grants. So, at least at this stage, it cannot be said that Blue Biotechnology is strictly privately driven. Suggestion - include also Pu
- row 3.5 – Aggregate mining (sand, gravel, etc) - At least in the Azores several enterprises work on this activity. There is local information about this activity.
- row 4.2 – Yachting and marinas – The study "The sea economy in Portugal" considers these activities (see also comments on Table 12). Needs improvement. There is also other statistical information about the marinas and the enterprises that run them locally, like in Azores.
- row 6.1/ 6.2 – Traceability and security…- There are agencies of the government that have this issue as a mission. ASAE (Autoridade de Segurança Alimentar e Económica, Orgão de Política Criminal - mainland), IRAE (Inspeção Regional das Atividades económicas-Azores). A national agency called SEF (Serviço de Estrangeiros e Fronteiras) deals with the illegal movement of people. Complementary data could be available.
- row 6.3 – Environmental monitoring - There are |

		several long term monitoring programs in Portugal (see qualitative description ahead) . There is no individual data on this in the National Accounts– having in mind a broad and complementary perspective: Plano Mar Limpo, Monizee, Monicap, Sificap, Sivic, Monitoring program for the bathing waters; Monizec - monitoring program for the Nature 2000 MPAs network; POPA - fisheries observation program; So, it might be not so difficult to find figures to fill in this activity.
31 to 34	Annex I – Table 12	Comment 1 – **Comparison of data from alternative sources** should be more precise, otherwise we might be comparing different things. For example: - row 0.1 Shipbuilding and ship repair – data from Eurostat refers to NACE 33.15, 30.11 and 30.12 (according with Table 14, page 38); data from Official National Statistical Sources, we are not sure what NACE codes are included and we don't know the precise source (National Accounts or "Estatísticas das Empresas"??); data from Alternative sources (Estratégia Nacional para o Mar) refers to NACE 33.15, 30.11, 30.12 and 38.31 - Dismantling of wrecks, as well (partial). - Other rows – the same transparence and precision is necessary Suggestion 1 – to add an additional column "NACE codes used" to each Source (Eurostat, Official National Statistical Sources and Alternative sources); eventually merge Tables 12 and 14. Sources should be more precise (which statistics and not only the entity) Comment 2 – as mentioned for Table 1, rows 0.2 **Construction of water projects** and **5.1 Coastal protection**, seems to be similar, and one of them could be eliminated. Suggestion 2 – consider the elimination of row 0.2; merge it in row 5.1 Comment 3 – Alternative sources – **data from Estratégia Nacional para o Mar**. Apart from the previous comment and suggestion on this table (to mention the NACE codes included), the reference to the document and some figures are not correct. Suggestions 3 – Change reference and figures: - Reference – *Estratégia Nacional para o Mar 2013-2020* - Rows 1.1, 1.2 and 1.3 **Maritime transport** (shipping and port activity) – GVA and employment figures seams to include only "shipping"/ NACE 50.10, 50.20 and 77.34; according to table 14, it should exclude part of 50.10 (for cruise tourism) and it should include figures for "port's activity"/ NACE 52.10, 52.22 and

		52.24 (128 – 9,3+1230,4 = *1349,1 for GVA* and 2,7-0,7+17,7= *19,7 for Employment*) - row 2.1 **Catching fish for human consumption** -GVA and employment figures should include correspondent NACE considered; to be more comparable with the figure from Eurostat should include also "Fish processing industry" (367,4+371,3= *738,7 for GVA* and 11,3+17,3= *28,6 for Employment)* - row 2.3 **Marine aquatic products** – *24,3 for GVA* and *2,3 for employment*; Source & Reference year: *Estratégia Nacional para o Mar 2013-2020, data for 2010;* correct the source in column "Other indicators" – *Estatísticas da Pesca, INE* - row 2.5 **Agriculture on saline soils** – these figures are too high; we don't know what this includes; find and explain a way to split from total agriculture. - row 3.5 **Aggregate mining (sand, gravel, etc)** - in Azores, there are ~10 enterprises working on this activity. - row 4.1 **Coastal tourism** – *1355,6 for GVA* - rows 4.2 **Yachting and marinas** and 4.3 **Cruise tourism** should include "nautical tourism" and "cruise tourism" (101+9,3= *110,3 for GVA* and 3,6+0,7= *4,3 for Employment*) - row 5.1 Coastal protection – *0,5 for employment*
36 and 37	Annex II – Table 13	<u>Comment</u> – should be specified if **Compound Annual Growth Rates (CAGR)** is in real figures (calculations using GVA at constant prices); otherwise the analysis is not correct; the majority of figures seems strange and unreliable, particularly the ones in rows 2.2 Catching fish for animal feeding (we don't know how this calculation was made nor the splitting criteria), 2.3 Marine aquatic products, 3.5 Aggregates mining (how can you have CAGR figures if in other tables of the whole document data is n/a??) and 4.1 Coastal tourism.
38 and 39	Annex III – Table 14	<u>Comment 1</u>– comparing this table NACE sectors associated to specific maritime economic activities with the Blue Growth report, august 2012, Annex 1, we found some differences. For instance, NACE 42.91 Construction of water projects should contribute to several functions in the august 2012 report, but now it's individualized in row 0.2. We think part of this NACE, or almost all of it (with the exception of dredging for ports activity) should be better fit in Coastal protection; The Guidance Report (DG Environment & MRAG/UNEP – WCMC/URS, 2012) recommends this way.
		<u>Comment 2</u> – we don't know why some **marine economic activities are missing**, such as 2.3 Marine aquatic products

(aquaculture), 4.2 Yachting and marinas (nautical tourism) or 5.1 Coastal protection.

Comment 3 – we understand some specific activities might be irrelevant for other countries but **in the case of Portugal NACE 08.93 - Extraction of salt is relevant for group 2. Food, nutrition, health and eco-system services**.

Comment 4 – activities such as 2.5 Agriculture on salin soils and 3.7 Securing fresh water supply (desalination), are not defined in terms of NACE codes.

Comment 5 - Although we agree the NACE selection criteria should be the same for all countries, for comparison purposes, when we compare this study with our own analysis to support the National Ocean Strategy ("The sea economy in Portugal") or with Eurostat "Study in the field of maritime policy"(1), our opinion is that this selection could be improved; for instance "Maritime Services" (including Support Services, R&D and Education and Classification & Inspection) and "Maritime equipment" are missing; as in Eurostat (1), this areas should be included, or NACE splited as contributions for several functions. Some suggestions are made ahead.

Suggestions

- row 0.1 Shipbuilding and repair – **to include NACE 38.31 - Dismantling of wrecks (according to Eurostat(1))**
- row 0.2 Construction of water projects – **to split NACE 42.91 Construction of water projects** (dredging and other works), part to 5.1. Coastal protection and part to Ports activity (dredging for ports activity); eliminate the row.
- rows 1.1, 1.2 and 1.3 Maritime transport – doubts regarding the splitting criteria of "*50% based on an inventory of various countries…*"(page 40), but no alternative suggestion. Nevertheless the GVA and Employment data obtained are not very reliable and should be analysed with care.
- rows 2.1 – Catching fish for human consumption and 2.2. Catching fish for animal feeding – doubts regarding the splitting criteria (page 40); we don't know if you used specific data for Portugal or if you base the splitting in European average data, which can distort the whole analysis!; should include *NACE 70.22 - Business and other management consultancy activities* **(according to Eurostat(1))**
- row 2.3 Marine aquatic products (missing) – should include *NACE 03.21 - Marine aquaculture, 03.22 - Freshwater aquaculture and 10.91 - Manufacture of prepared feeds for farm animals* **(according to Eurostat(1))**

		- row **2.4 Extraction of salt** (new) - group 2. Food, nutrition, health and eco-system services should include **NACE 08.93 - Extraction of salt (according to Eurostat(1))** - row 3.5 Aggregates mining (sand, gravel etc) – should include also **NACE 08.99 - Other mining and quarrying n.e.c.** - row 4.1 Coastal tourism – should include part of restaurants, beverage and catering as well as travel agencies and recreational activities, namely: **NACE 56.10 - Restaurants and mobile food service activities, 56.30 - Beverage serving activities, 56.21 - Event catering activities, 56.29 - Other food service and related activities, 79.11 - Travel agency activities, 79.12 - Tour operator activities, 79.90 - Other reservation service and related activities, 91.01 - Library and archives activities, 91.02 - Museums activities, 91.03 - Operation of historical sites and buildings and similar visitor attractions, 91.04 - Botanical and zoological gardens and nature reserves activities** (according to Eurostat(1) and Tourism Satellite Accounts); splitting criteria for GVA and Employment in coastal NUTs 3 of Portugal can use data on the "Estatísticas das Empresas", INE (criteria used in the support document to the National Ocean Strategy "The sea economy in Portugal"). - row 4.2 Yachting and marinas (missing) – should include part of **NACE 85.51- Sports and recreation education, 93.11 - Operation of sport facilities, 93.12 - Activities of sport clubs, 93.19 - Other sport activities (including leisure fishing), 93.29 - Other amusement and recreation activities (including marinas),** (according to Eurostat(1) and Tourism Satellite Accounts) and **46.14 - Agents involved in the sale of machinery, industrial equipment, ships and aircraft, 46.69 - Wholesale of other machinery and equipment (**according to Eurostat(1) Maritime Services - Support Services) - other activities (new) - Maritime Services" (including Support Services, R&D and Education and Classification & Inspection) and "Maritime equipment" (see NACE codes considered in Eurostat (1)).
Qualitative review of maritime economic activities in a MS at NUTS-0 level		
7	**Shipbuilding** – Paragraph 1 - "*Shipbuilding in Portugal is a traditional and old sector that it is seen as a non-*	<u>Comment</u> – the sentence is incorrect. <u>Suggestion</u> – change the wording taking into consideration that **for the Windfloat platform, the first floating offshore wind device, the wind turbine was all assembled, installed and pre-commissioned in Lisnave shipyard, Setubal.**

	innovative industry".	
	Paragraph 3 – "*Regarding the leisure boats sector, […], has not developed an industry in shipbuilding and repairing of recreational boats, …*".	Comment - There are several enterprises working in Portugal. All the Azorean fishing fleet have been reconverted and the new boats have been built in Portugal, by Portuguese companies that also build recreational boats.
7	**Construction of water projects** – Paragraph 1 and Paragraph 2 -	Comment 1 – The first paragraph, second sentence, doesn't concern the sea and maritime constructions Suggestion 1 – To eliminate it. Comment 2 – The second paragraph regards "Coastal protection". Suggestion 2 – To transfer this paragraph to the "Coastal protection item, page 14. So, the whole item could be deleted and included in "Coastal protection". Comment 3 – data refered in paragraph 2 - 173 coastal protection works to be performed until 2015. - include the works predicted in the Azores? Just for information, it is planned to spend about € 5,000,000 to accomplish 17 coastal protection projects in the Azores until 2016. During last years several works were accomplished already by the Regional Government.
7/8	**Maritime transport** **Passenger ferry** Paragraph 1 - *Ferry service providers in Portugal mainly operate between the Azores Islands and from Lisbon across the Tagus river. In 2008, a new ferry service was launched from Portugal (from the port of Portimao in the south)*	Comment 1– This box considers the port's activity as a whole, deep sea shipping, short sea shipping, passenger ferry and inland waterway transport. The figures in tables 1 and 14 are not consistent with tis text. Port's Activity should be included, as already mentioned. Comment 2 /Suggestion – ***In order to strenghten the Port of Sines, as an importante european logistic platform, the necessary freight railway infrastructure should be developed to connect to the center of Europe.*** ***This infrastructure should connect the Portuguese Ports in a smart and competitive network for the hinterland and to provide more ecological friendly transport alternative routes.*** Comment 3/ Suggestion – Regarding "Passenger ferry": - replace "*between the Azores Islands*" by "**Among eight of the nine islands of the Azores**"; - when mentioning "*from Lisbon across the Tagus river*" references should be made to passenger transportation in the river Sado estuary, as well as regular ferry between the islands of Madeira and Porto Santo.

	to Madeira. This was the first ferry …" **Inland waterway transport**	- Appart from the ferry service between the two islands in Madeira, in 2008, a ferry service was launched from the Maindand (port of Portimão in the south) to Madeira. This ferry was posteriorly closed. Although its social relevance and need remains, promoters are not showing interest in its operation. Comment 4 – Regarding Inland waterway transport - Could be anything said about possibilities of growth? Namely, in the larger estuaries.
8	**Fishery** – Paragraph 2 *"One of the main features of this sector is its fragmented structure composed of a vast number of SMEs and small vessels with a crew of one or two people. This fact leaded to the creation of Organizações de Produtores (Producers Association), implemented with the aim to regulate the market."*	Comment 1 - This document, in general, seems to present the economic activity as based in SMEs as negative. However, there is no reason to believe that small fisheries enterprises cannot be competitive. This issue is not convincingly presented throughout the document. Comment 2 - The objectives of the producers association was not only this one. Technically, they do not have the power to do that directly, as in Vigo Spain. The fish is sold in free markets in auctions. However, the objectives are to organize producers and to allow them to lobby in several subjects of fishing activity.
9	**Fishery** – Paragraph 1 - *"The absence of a rigorous scientific knowledge of stocks exploited by the Portuguese fleet and the lack of knowledge and technologies applied to the fish transformation are other factors that hampered the sector's productivity".*	Comment – We would like to know what references have been considered. What is meant here by "*rigorous scientific knowledge of stocks exploited*"? Portugal is member of the international organizations that deal with stock management, having scientists working on the boards of ICES, ICCAT and NAFO. Portugal is also part of the EU, which means that has to comprise with the European regulations and requirements related to stock management. Suggestion – We add some additional information in what concerns the knowledge of stocks: **the figure for the exploited stocks by the Portuguese fleet, including quantitative advice on the fishing opportunities, increased in the last year; according to the MSFD evaluation (descriptor 3), that analysis the commercially exploited stocks in the Continental EEZ – fish, crustaceans and mollusks – we can conclude that only a small number is classified as failing the GES.** **Regarding the manufacturing industry, the way should be the commitment on quality, with product differentiation through the know-how quality, thus directing the production to niche markets of higher added value.**
9	**Fishery** – Paragraph 4 –	Comment - That´s why the SMEs may be more competitive

	"Therefore, and given the relative scarcity of natural resources, according to Cotec Portugal[15], the focus should be set on the quality and variety of the fish rather than on the quantity."	that large enterprises. In the Azores, for example, where the fishery is totally based in SMEs, efforts are already in place to assure the certification through eco-labelling: -Dolphin safe (for tuna); -Friends of the Sea (for general fish). <u>Suggestion</u> - Footnote 15 – replace *"President of Portugal"* by *"**President of the Portuguese Republic**"*
9	**Aquaculture –** Paragraph 1 – *"Important constraints are the obsolete production methods, barriers to accessing the credit, difficulties in obtaining production licenses or the lack of institutional commitment, in particular related to the maritime and costal development plans establishing specific areas to develop aquaculture activities."*	<u>Comment 1</u> – Information on this box lacks references. No literature is provided. <u>Comment 2</u> – The sentence is not accurate. <u>Suggestion</u> – Replace the sentence by: ***Barriers to accessing the credit and difficulties in obtaining production licenses, in particular related to the maritime and coastal development plans establishing specific areas to develop aquaculture activities are some of the most important constrains to aquaculture**. Another one is related with the fact that the majority of the productions units are located in protect areas, which don't allow production methods that make use of more advanced technology equipment.* <u>Comment 3</u> - Footnote 16 -INE statistics source: Fishing Statistics is the same as "Estatísticas da Pesca"?
10	**Algae** – Paragraph 2 – **"***Therefore, nowadays, in Portugal there is no algae production neither for human consumption nor for other purposes, except for some experiments in microalgae for CO2 absorption."*	<u>Comment 1</u> - No literature is provided. <u>Comment 2</u> – The first part of the sentence is not accurate, since, according to the support document to the National Ocean Strategy, "The Sea Economy in Portugal", or the Portuguese report for MSFD, there is algae production for human consumption and other purposes. <u>Suggestion</u> – Eliminate the sentence. According with "The Sea Economy in Portugal" (pág, 86) algae production exists, although its expression is much less than in the past. In 2012, twenty permits were given and the production totalized 267 tons, corresponding to 386 995 euros.
10	**Salt production –** Paragraph 4	<u>Comment</u> – the paragraph is correct. Tables 1 and 14 should reflect this.
10	**Blue biotechnology –** Paragraph 1 – *"Marine biotechnology, along with underwater robotics or ICT companies are among the so-called "new uses and resources of the sea". They form an*	<u>Comment 1</u> – The first paragraph also mention the underwater robotics or ICT as new emerging sectors. <u>Suggestion</u> – to consider this topics on a separate group such as "Marine Equipment" (see also general comments and last suggestion on Annex III – Table 14) <u>Comment 2</u> – Comparing the text on this box on "Blue Biotechnology" with the ranks in Tables 7 and 11, we would expect that marine genetic resources would be mentioned for other purposes apart from biotechnology.

	emerging sector in Portugal and in view of its extended maritime area; Portugal could eventually be a major player in this industry.”	It's also important, for example, to consider the necessary interlinks with the objectives of biodiversity preservation, or the elements of the future national and EU regulation regime for the sharing benefits on the use of this resources. There is no mention to the protection of habitats, apart a small one in coastal protection).
11	**Agriculture in saline soils**	Comment – We are not quite sure of the purpose of this? Is this a maritime sector or an environmental problem?(see other comments on this document, about this activity)
11	**Energy and raw materials** – Paragraph 2 – **“***It is crucial for the Portuguese economy to boost those sectors, especially considering its high dependence on imported energy.”*	Comment – The first statement should be a conclusion.
11	**Offshore wind –** Paragraph 1 – *“Offshore wind in Portugal is still non existent, although clear potential is recognized.”* Paragraph 3 – **“***According to the National Action Plan for Renewable Energy, the goal for 2020 will be the installed capacity not exceeding 75 MW, which will be used mainly for research and technological development.”*	Comment 1 – There are pilot projects already implemented on this: http://wikienergia.com/~edp/index.php?title= EDP_e_Principle_Power_estudam_e%C3%B3licas_ offshore_em_Portugal Comment 2– The National Action Plan for Renewable Energy was revised and the figures are no longer the same. Suggestion – Replace the sentence by: ***According to the National Action Plan for Renewable Energy, the contribution of this technology will be 27 MW, which will be used primarily for research and technological development (***RCM nº 20/2013, de 10 de abril, pág. 2076)
12	**Ocean renewable energy – Wave energy** – Paragraph 1 – *“In addition, there are also two public support schemes in place, the Feed-in tariff per kWh for wave energy (Decree-Law 225/2007) and the Pilot zone for wave energy projects […] installed Capacity of*	Comment – The National Action Plan for Renewable Energy was revised and this sentence is no longer accurate. Suggestion – Replace the sentence by: ***In addition Portugal has already conceded a pilot zone (DL238/2008) for the development of projects related to wave energy, which is expected in the future, can also come to accept projects exploring other marine energy resources. All those aspects will encourage wave energy in the country that is expected to reach an installed capacity of 6 MW by 2020.*** (RCM nº 20/2013, de 10 de abril, pág. 2077) Suggestion 2 – To complete the sentence with the SURGE

	250 MW by 2020" Paragraph 2 – *"Like the wind energy, the wave offshore energy at present […] the Pilot Project in S. Pedro de Muel, or the Pico Wave energy plant in the Azores."*…	project in Peniche: *"Like the wind energy, […] such as the Wave energy demonstration centre in Aguçadoura, the Pilot Project in S. Pedro de **Moel, and the project called "Simple Underwater Renewable Generation of Energy - SURGE" in Peniche (**http://aw-energy.com/concept.html#!/projects/project-surge**)** or the Pico Wave energy plant in the Azores"*.
12	**Aggregates mining (sand, gravel, etc.) and marine minerals mining**	<u>Comment -</u> In the Azores, one dozen of enterprises dedicated to the exploitation of marine sand and gravel operate throughout the archipelago.
13	**Securing fresh water supply / desalination** – Paragraph 4	<u>Comment</u> – the sources should be mentioned
13	**Leisure and tourism** Paragraph 1 - *Leisure and tourism is […] in Portugal, this industry is underdeveloped, in particular when compared with other European coastal countries.* Paragraph 3 - *It will be also important to increase the size of the enterprises, since in general the sector is made up by a significant number of SMEs. […], will contribute to the decrease of the seasonality of coastal tourism Portuguese.*	<u>Comment</u> 1- We cannot with the statement *"Nevertheless in Portugal, this industry is underdeveloped,..".* <u>Suggestion</u> – delete the sentence *"Nevertheless, in Portugal, this industry is underdeveloped, in particular when compared with other European coastal countries."* <u>Comment 2 –</u> *"It will be also important to increase the size of the enterprises"* - a bias towards big enterprises. <u>Comment 3 -</u> Wishful thinking. Too many assumptions in this section, considering that the National Strategic Plan for Tourism (PENT) wasn't mentioned.
13	**Coastal tourism** – Paragraph 1 – *Coastal tourism […] .With a 1,800 km of coastline including the continental territory (943km) and the*	<u>Comment 1</u>– the sources should be mentioned <u>Suggestion</u> – replace *"Açores (667km)"* by *"**Açores (1019km)"*** <u>Comment 2 –</u> Paragraph 3 - Some activities have experienced a steady increase in the Azores, apart from surfing: -Scuba diving; -Whale watching; -Shark diving.

		archipelagos of Açores (667km) and … Paragraph 3	
14		**Yachting and marinas –** Paragraph 1 – […] *In the archipelagos of Açores and Madeira there are more than 2,400 berthing places.* Paragraph 4 - *"[…] canoes and surfboards, has not developed an industry in shipbuilding and repairing of recreational boats, …"*	Comment 1 – Paragraph 1 - Is this data related with all boats or foreign boats? (DRAM/GRA) Comment 2 - Paragraph 4 - Although there are a number of builders.
14		**Coastal protection (protection against flooding and erosion, preventing salt water intrusion, protection of habitats)** **– Paragraph 1 –** **"***According to the figures provided in Table 1 (GVA and Employment) related to coastal protection, there is lack of official data on Eurostat and the National Statistics Institute* *(…) "Regarding the GVA figure, data is only available from one source (Estratégia para o mar), amounting to € 39.1 bn."* Paragraphs 2 and 3 **Paragraph 4 - "***The Ministry for Environment, Spatial Planning and Regional Development (MAODTR) is responsible for the Public Maritime Domain*	Comment 1 – That depends on what NACE you consider for this item. As in our previous comment on Table 1, row 02 Construction of water projects, we consider that figures for NACE 42.91 fits better on "Coastal protection", as part (other part might correspond to ports dredging). Comment 2 – The name of the document is Estratégia Nacional para o Mar. Comment 3 - Some figures are not correct. Suggestion 1 – to correct this sentence "*Regarding the GVA figure, data is only available from one source (Estratégia Nacional para o Mar 2013-2020), amounting to € 39.1 million.*" (39 100 000 euros) Comment 4 – Paragraphs 2 and 3 - the sources should be mentioned. Comment 5 – Paragraph 4 - the designation of the ministry in charge is no longer the same. Suggestion 2 – Replace "*Ministry for Environment, Spatial Planning and Regional Development (MAODTR)*" by "***Ministry for the Sea and Agriculture (MAM)"*** Regional Governments of Azores and Madeira have also

	(PMD), a 50 m coastal strip which is mainly preserved from occupation and in which land can not be turned into private property. As a result, the state is responsible for providing and funding protection if erosion affects an area landward of the PMD zone."	shared responsibilities in its management.
15 and 16	**Maritime monitoring and surveillance** Paragraph 2 - *"In the area of maritime monitoring and surveillance in Portugal, notably the National Maritime Authority (Marinha Portuguesa) plays the most significant role as this activity is one of its statutory competences. In the sub area of prevention and protection against illegal movements of people and goods, the Forças Armadas and the Forças e Serviços de Segurança also contribute to this action. In addition to these, other administrative corps that also contribute to maritime monitoring and surveillance in Portugal are:* Paragraph 3 – list of entities Paragraph 4 – *"Regarding*	<u>Comment 1:</u> We recommend being more thorough regarding the different authorities involved in the national maritime monitoring and surveillance activities. <u>Suggestion 1:</u> Change paragraphs 2 and 3 as follows***: In the area of maritime monitoring and surveillance in Portugal, several public authorities are involved according to their statutory competences, namely the National Maritime Authority (AMN), coordinating the Navy, the Directorate-General for the Maritime Authority (DGAM) and the Maritime Police (PM), the Portuguese Air Force (POAF), the Directorate-General for Natural Resources, Maritime Safety and Services (DGRM), the Portuguese Institute for Sea and Atmosphere (IPMA), the Portuguese Hydrographic Institute (IH), the Food and Economic Security Authority (ASAE), the Aliens and Borders Service (SEF), the International Security System (SSI), the Nature and Forest Conservation Institute (ICNF), the National Health Authority (NHA), Portuguese Environment Agency (APA), Public Security Police (PSP), the Civil Protection National Authority (ANPC), the Judiciary Police (PJ), the Customs and Taxes Authority (AT) and the National Republican Guard (GNR).*** <u>Comment 2</u> – Paragraph 4 – Regional Governments of Azores and Madeira have also shared responsabilities. Regarding the Azores, monitoring is done in close collaboration with the Department of Oceanography and Fisheries, University of the Azores. A number of programs are currently enforced: -Fisheries observer program for the Azorean tuna fisheries;

	environmental monitoring in particular, the role played by the Institute of Oceanography at the University of Lisbon is also worth mentioning."	-Regular fisheries surveys: -Monizec- Nature 2000 -Monicet -whale watching monitorization among others <u>Suggestion 2</u> – Paragraph 4 – Replace the sentence by *"**Regarding environmental monitoring the definition of monitoring programmes are being developed according with the MSFD, which is coordinated by DGRM. Nevertheless there are in place some importing monitoring systems like: Plano Mar Limpo, Monizee, Monicap, Sificap, Sivic, Monitoring program for the bathing waters; Monizec - monitoring program for the Nature 2000 MPAs network; POPA - fisheries observation program**. **Also important are knowledge and information from the Portuguese Universities and Research Institutes***
1.2. Breakdown of maritime economic activities at regional level (NUTS 1 or NUTS 2)		
18 to 20	Table 3 – Overview of employment and GVA per maritime economic activity per region in Portugal	<u>Comment 1</u> – the criteria and sources are missing (how was the splitting by region done? With GVA?, with Employment? Using what sources? "Estatísticas das empresas"?; we don't agree with the use of the same criteria for GVA and Employment, as it can be substantially different for most activities; the Statistics Portugal (INE) has desagregated data for GVA and Employment in "Estatísticas das Empresas", that can be used for splitting purposes. <u>Comment 2</u> – In what concerns "Maritime transport (rows 1.1, 1.2 and 1.3) it's important to include the port's activity. <u>Comment 3</u> – Line 2.3 "Marine aquatic products", might have a mistake, because the sum of the percentages is above 100%. <u>Comment 4</u> - Does the zeros stand for no employment whatsoever or it should be considered >1? (for example in the Azores we know that employment exists in almost all of these activities). <u>Comment 5</u> – row 3.5. n/a - at least in the Azores there are one dozen of enterprises working on this activity.
2. Listing of the 7 largest, fastest growing and most promising marine and maritime economic activities		
21	Table 4 - Listing the 7 largest maritime economic activities in a MS at NUTS-0 level	<u>Comment 1</u> – The "Score" criteria is not explained. <u>Comment 2</u> – we have two main aspects against this table results and possible conclusions: - we believe the figures for "Short-sea shipping" and "Deep-sea-shipping" are inaccurate for the reasons mentioned in previous comments made for Table 1 and table 12 (the figures miss data for ports activity, that according to table 14 should be splited among these activities); - we are not comfortable with the splitting between "Catching fish for human consumption" and "Catching

		fish for animal feeding"; as we mentioned before, the criteria is not explicit and it might distort the analysis.
22	Table 5 - Ranking order of the 7 fastest growing maritime economic activities in a MS at NUTS-0 level	Comments 1 – the same as for table 4; we also have doubts about the CAGR calculation for GVA (see previous comments on Annex II, Table 13); so, we think this analysis is not accurate. Comment 2 – row 3. - If the ferry between Madeira and Portimão doesn't operate, these shouldn´t be included here.
23	Table 6 - Future potential of economic activities	Comment 1 - This table is too subjective. It´s an expert's appreciation, so it would be interesting to know the list of national experts included in this judgment, as well as the criteria used. Comment 2 - We don't understand and don't agree with the classification of "-" or "0" in "Innovativeness" or "competitiveness" or "employment", or "policy relevance" or "overall score" for some activities: - row 0. 1 - Shipbuilding - There is plenty of room for this activity to carry innovation; Why is it considered that shipbuilding and ship repair cannot be competitive? ; Overall score zero? It is questionable and should be reconsidered. - row 1.2 - Short-sea shipping (incl. RoRo) – regarding employment, this activity tends to rely on local labour. Not only to work on the boats, but also on land facilities. - row 2.1 - Catching fish for human consumption - There is room still for increasing innovativeness and competitiveness. The eco-labeling, for example, can bring added value to the fishing products. (DRAM/GRA) - row 2.3 Marine aquatic products – regarding policy relevance, it is relevant. This should be reconsidered. The development of aquaculture has always been an important aim to Portugal. - row 2.5 Agriculture on saline soils –we don't know what this can be. - row 3.5 – Aggregates mining (sand, gravel, etc) - Consider to include data on this issue in all columns, mainly due to Açores . - rows 4.1, 42 and 4.3 on tourism activities - Why are these activities considered to bring no innovativeness and competitiveness? Please reconsider. - rows 5.1, 5.2 and 5.3 – coastal protection - we cannot agreed with zero for coastal protection; - rows 6.1/6.2 and 6.3 - maritime monitoring and surveillance – don't agree with "0" on employment - of course it brings employment. We don't agree with just one "+", when we have a big area to monitor according

		the Marine Strategy Framework Directive. We have potential in information and communication technologies and robotics that are essential for these last sectors.
24	Table 7 - Ranking order of the 7 most promising maritime economic activities in a MS at NUTS-0 level	<u>Comment -</u> This table is too subjective. It would be interesting to know the list of national experts included in this judgment, and why the score.
24	Brief explanation of the results of the ranking – Paragraph 3	<u>Comment -</u> It seems difficult to understand why a traditional activity (for which know-how already exists) is, by definition, not competitive.
3.Identification of the most innovative components of Blue Growth		
25 to 27	Table 8 – Scoring of the maritime economic activities on innovation criteria; and	<u>Comment</u> – In Table 8 were indicated 23 maritime economic activities, but it was only presented scoring information, on innovation criteria, in 9 of them, so this table is considered to be incomplete and limited. Maybe it should be rethinked. In terms of the innovation indicators, we are presenting some comments, without prejudice of presenting further information subsequently, as it is development in Portugal, a study called "indicators for National Ocean Strategy, in a sustainable development perspective", which intends to reach indicators for many areas, including innovation. It`s a reference in this work our cooperation with National Statistics Institute (which reports information to Eurostat) and also Science and Technology Foundation. In general, we can´t agree that a set of indicators that were not applied in most cases can allows to make a ranking as it is presented in table 12 of the present document. We can only accept a ranking of activities that were characterized and evaluated. In fact, the activities without information can be also very innovative ones. The following comments are referred to the activities mentioned in table 8: As Portugal participated in several research projects during the period 2007-2013 in areas of fishing and aquaculture, for example, this activities should be reflected in table 8, what isn`t the case. "Aquaculture" is a relevant maritime economic activity, so it should be referenced in table 8 and also "fishing processing industry". Are they included in "Marine aquatic products". In Portugal, tourism is an economic activity with high expression, and is important in what respect blue growth. As we already mentioned maritime tourism should be complemented with others activities. "Coastal tourism",

		"cruise tourism" and "yachting and marinas" are already express in the Table, but not in terms of nautic and nature tourism. Considering the activities in Tourism Satellite Accounts the characterization of coastal tourism could be improved.
		In Table 8, it should be presented an activity called "Ports", which is an activity of major relevance in Portugal and the innovative processes are very relevant in this field and we consider that Portugal has important initiatives in this context.
		Generally, we believe that innovation indicators doesn´t reflect the enormous investment on innovation that has been done in Portugal during the past years and the conclusions of the study could be bias because of the lack of information for most of the sectors. So, we think that this component should be improved in order to better express the current status.
	Table 9 – Qualitative assessment regarding innovation scoring	Suggestions - According to the document "*Blue growth for Portugal. Uma visão empresarial da economia do mar*" (COTEC, Nov. 2012), we present some improvement on the redaction of Table):
		▪ In "Maritime enterprises", it should be added that the national sectorial clusters are very important for national maritime economy, and should be implemented, in order to improve the added value of chain in maritime activity sectors.
		▪ The "maritime transport" should be "Maritime transport and ports" as it is in the "Blue growth (…)" and as it is in the text referred in table 9;
		▪ In "Maritime Transport" sector, the text should be changed to: "within the general context of the maritime economy in general and maritime transport in particular, innovation is a factor of development particularly present in the ports sector".
		▪ In "Aquaculture" sector, the redaction should be the following: "Existence of large number of small family business with weak capacity of management, innovation and introduction of new technologies. One challenge is introducing innovation and diversification in aquaculture production, including innovation in the product".
		▪ In "Leisure" sector, it can be added the following sentence: "There is general need to invest in innovation in this sector. It should be established certification mechanism of activities, in order to improve the quality of the offer available".
	Table 11 – Ranking order of the 7 most	Comment 1- In table 11 is presented the ranking order of the 7 most innovative activities, but the main problem is

	innovative maritime economic activities in a MS at NUTS-0 level	that the basis for this ranking was the information presented on table 8, which was limited and incomplete, as already mentioned, so, the results on table 11 can´t be considered realistic and representative of the situation under this criteria.