

# **DG Mare - Assistance in elaboration and prospective evaluation of the Atlantic Action Plan – Phase 2**

Guidelines for the Atlantic Action Plan's monitoring  
(Indicators report)

Final version

April 30<sup>th</sup>, 2014

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## Introduction

This document contains guidelines aiming at providing with some insights on potential methodological tools, indicators and sources to be used to monitor progress made in the Atlantic area towards achieving the goals of the Atlantic action lan (AAP) and facilitate future data collection arrangements.

This document contains:

- ▶ A short description of the approach used to identify the indicators / descriptors and their limitations.
- ▶ A list of selected indicators that could be used to monitor the AAP as well as a detail of each selected indicator.
- ▶ The operational implications of the implementation of the monitoring system, especially limitations linked to collecting data for each of the suggested impact and result indicators and the collection of data for output indicators.

Finally some reflections are given to the practical consideration when estimating the indicators.

# 1 Introduction to the Atlantic Action Plan (AAP): structure and content

Prior to establishing a monitoring system, a first step is to clearly identify the subject to be followed and express it into outputs, results and impacts, linked to the objectives of the Atlantic Action Plan.

In this sense, the Atlantic Action Plan was schematized into an intervention logic chart which enables establishing a clear hierarchy and links between different levels of the Atlantic action plan's priorities, general, specific objectives and operational objectives.

## *Structure of the AAP*

### **Preliminary definitions of the different levels of objectives:**

*Objectives of an intervention are usually defined at several levels:*

- ▶ **general objectives** set out broad goals looking at the long-term future.
- ▶ **specific objectives** set out what the intervention is meant to achieve on a medium-term future. In general, several specific objectives should be fulfilled to obtain general objectives.
- ▶ **operational objectives** relate to intervention inputs (project activities, deliverables, etc.).

The intervention logic of the Atlantic Action Plan is structured as follows:

- ▶ 4 priorities which relate to key general objectives of the Atlantic Action Plan: (i) promoting entrepreneurship and innovation, (ii) protecting, securing and developing the Atlantic marine and coastal environment, (iii) improving accessibility and connectivity, and (iv) creating a socially inclusive and sustainable model of regional development;
- ▶ 10 specific objectives indicating the main areas of focus and aiming at breaking down each priority into intermediate objectives linked to a specific sector, policy or challenge:
  - Knowledge sharing (1.1)
  - Enhanced capacity through improved skills (1.2)
  - Support to the CFP (fisheries and aquaculture) (1.3)
  - Maritime safety and security (2.1)
  - Marine waters and coastal zones exploration and protection (2.2)
  - Sustainable management of marine resources (2.3)
  - Exploitation of renewable energy potential (2.4)
  - Ports' cooperation (3)
  - Social challenges (4.1)
  - Tourism (4.2)
- ▶ A total of 37 operational objectives targeting activities and focus areas at a project level.

The following table presents a synthetic view of the AAP. The numbering of priorities and objectives was defined by the consultant in order to facilitate the orientation in the Atlantic Action Plan during the elaboration of the Indicators and Baseline reports. Priorities are marked with a single number. Specific objectives were given a two-set code with numbers separated by dots; the first number corresponds to the priority to which the specific objective is attached in the Atlantic Action Plan. Operational objectives have a three-digit code number. The first two numbers (separated again by a dot) correspond to the

specific objective to which they are linked in the Atlantic Action Plan. The last digit is a letter, which distinguishes the different operational objectives attached to one specific objective.

# DG MARE - Assistance in elaboration and prospective evaluation of the Atlantic Action Plan – Phase 2 Guidelines for the Atlantic Action Plan’s monitoring

**Figure 1: Synthetic view of the Atlantic Action Plan**

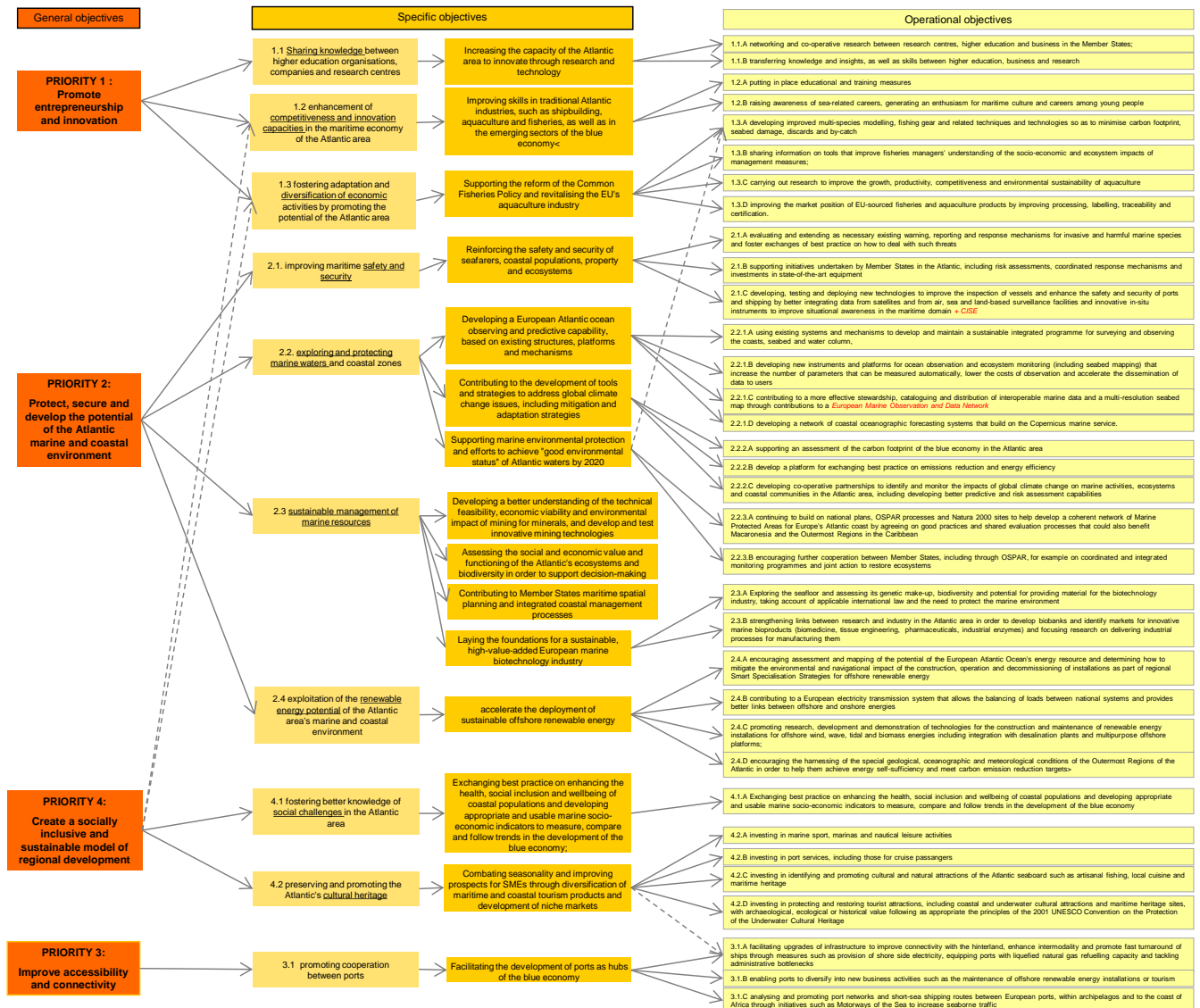
General objectives	Specific objectives	Operational objectives	
PRIORITY 1: Promote entrepreneurship and innovation	1.1 Sharing knowledge between higher education organisations, companies and research centres	Increasing the <u>capacity of the Atlantic area</u> to innovate through research and technology	<p>1.1.A networking and co-operative research between research centres, higher education and business in the Member States;</p> <p>1.1.B transferring knowledge and insights, as well as skills between higher education, business and research, including through regional, national and cross-border maritime clusters and technology platforms</p> <p>1.2.A putting in place educational and training measures, including crossborder programmes and mutual recognition of national education and training programmes</p> <p>1.2.B raising awareness of sea-related careers, generating an enthusiasm for maritime culture and careers among young people and addressing other barriers that discourage young people from embarking on a maritime career (see The Task Force on Maritime Employment and Competitiveness); for example through sail-training, advanced technology courses and other joint Atlantic initiatives</p> <p>1.3.A developing improved multi-species modelling, fishing gear and related techniques and technologies so as to minimise carbon footprint, seabed damage, discards and by-catch</p> <p>1.3.B sharing information on tools that improve fisheries managers' understanding of the socio-economic and ecosystem impacts of management measures;</p> <p>1.3.C carrying out research to improve the growth, productivity, competitiveness and environmental sustainability of aquaculture (including offshore aquaculture) and the industry's ability to respond to market needs</p> <p>1.3.D improving the market position of EU-sourced fisheries and aquaculture products by improving processing, labelling, traceability and certification.</p>
	1.2 enhancement of competitiveness and innovation capacities in the maritime economy of the Atlantic area	Improving <u>skills</u> in traditional Atlantic industries, such as shipbuilding, aquaculture and fisheries, as well as in the emerging sectors of the blue economy	
	1.3 fostering adaptation and diversification of economic activities by promoting the potential of the Atlantic area	Supporting the <u>reform of the Common Fisheries Policy and revitalising the EU's aquaculture industry</u>	
PRIORITY 2: Protect, secure and develop the potential of the Atlantic marine and coastal environment	2.1. improving maritime safety and security	Reinforcing the <u>safety and security</u> of seafarers, coastal populations, property and ecosystems	<p>2.1.A evaluating and extending as necessary existing warning, reporting and response mechanisms for invasive and harmful marine species and foster exchanges of best practice on how to deal with such threats</p> <p>2.1.B supporting initiatives undertaken by Member States in the Atlantic, including risk assessments, coordinated response mechanisms and investments in state-of-the-art equipment that contribute appropriately to enhancing coordinated preparedness and responses to marine threats, natural disasters, marine accidents, spills of oil and hazardous material or trafficking</p> <p>2.1.C developing, testing and deploying new technologies to improve the inspection of vessels and enhance the safety and security of ports and shipping by better integrating data from satellites and from air, sea and land-based surveillance facilities and innovative in-situ instruments to improve situational awareness in the maritime domain</p> <p>2.1.D helping to deliver regional sea-basin-related information services within the Common Information Sharing Environment (CISE), based on agreed EU-wide standards and experience gained by Member States in pilot projects</p> <p>2.2.1.A using existing systems and mechanisms to develop and maintain a sustainable integrated programme for surveying and observing the coasts, seabed and water column, covering the waters of EU Member States, Outermost Regions and Overseas Countries and Territories from the coasts to the deep ocean</p> <p>2.2.1.B developing new instruments and platforms for ocean observation and ecosystem monitoring (including seabed mapping) that increase the number of parameters that can be measured automatically, lower the costs of observation and accelerate the dissemination of data to users</p> <p>2.2.1.C contributing to a more effective stewardship, cataloguing and distribution of interoperable marine data and a multi-resolution seabed map through contributions to a European Marine Observation and Data Network</p> <p>2.2.1.D developing a network of coastal oceanographic forecasting systems (including risk assessments) that build on the Copernicus marine service.</p> <p>2.2.2.A supporting an assessment of the carbon footprint of the blue economy in the Atlantic area</p> <p>2.2.2.B develop a platform for exchanging best practice on emissions reduction and energy efficiency</p> <p>2.2.2.C developing co-operative partnerships to identify and monitor the impacts of global climate change on marine activities, ecosystems and coastal communities in the Atlantic area, including developing better predictive and risk assessment capabilities</p> <p>2.2.3.A continuing to build on national plans, OSPAR processes and Natura 2000 sites to help develop a coherent network of Marine Protected Areas for Europe's Atlantic coast by agreeing on good practices and shared evaluation processes that could also benefit Macaronesia and the Outermost Regions in the Caribbean</p> <p>2.2.3.B encouraging further cooperation between Member States, including through OSPAR, for example on coordinated and integrated monitoring programmes and joint action to restore ecosystems</p> <p>Not specified</p> <p>Not specified</p>
	2.2. exploring and protecting marine waters and coastal zones	Developing a European Atlantic ocean <u>observing and predictive capability</u> , based on existing structures, platforms and mechanisms to support the implementation of EU policies, reduce costs for industry, public authorities and research institutions, stimulate innovation and reduce uncertainty in the behaviour of the Atlantic ocean and the impact of climate change	
		Contributing to the development of tools and strategies to address <u>global climate change issues</u> , including mitigation and adaptation strategies	
		Supporting <u>marine environmental protection</u> and efforts to achieve "good environmental status" of Atlantic waters by 2020	
		Assessing the <u>social and economic value and functioning of the Atlantic's ecosystems</u> and biodiversity in order to support decision-making	
		Contributing to Member States <u>maritime spatial planning and integrated coastal management</u> processes, for example by sharing best practice and facilitating cross-border coordination.	
		Developing a better understanding of the technical feasibility, economic viability and environmental impact of <u>mining for minerals</u> in the Atlantic Ocean, and develop and test innovative mining technologies	Not specified
	2.3 sustainable management of marine resources	Laying the foundations for a sustainable, high-value-added European <u>marine biotechnology industry</u>	<p>2.3.A Exploring the seafloor and assessing its genetic make-up, biodiversity and potential for providing material for the biotechnology industry, taking account of applicable international law and the need to protect the marine environment</p> <p>2.3.B strengthening links between research and industry in the Atlantic area in order to develop biobanks and identify markets for innovative marine bioproducts (biomedicine, tissue engineering, pharmaceuticals, industrial enzymes) and focusing research on delivering industrial processes for manufacturing them</p> <p>2.4.A encouraging assessment and mapping of the potential of the European Atlantic Ocean's energy resource and determining how to mitigate the environmental and navigational impact of the construction, operation and decommissioning of installations as part of regional Smart Specialisation Strategies for offshore renewable energy</p> <p>2.4.B contributing to a European electricity transmission system that allows the balancing of loads between national systems and provides better links between offshore and onshore energies</p> <p>2.4.C promoting research, development and demonstration of technologies for the construction and maintenance of renewable energy installations for offshore wind, wave, tidal and biomass energies including integration with desalination plants and multipurpose offshore platforms;</p> <p>2.4.D encouraging the harnessing of the special geological, oceanographic and meteorological conditions of the Outermost Regions of the Atlantic in order to help them achieve energy self-sufficiency and meet carbon emission reduction targets</p>
	2.4 exploitation of the renewable energy potential of the Atlantic area's marine and coastal environment	Accelerate the deployment of sustainable <u>offshore renewable energy</u>	
	PRIORITY 3: Improve accessibility and connectivity	3.1 promoting cooperation between ports	Facilitating the development of <u>ports</u> as hubs of the blue economy
4.1 fostering better knowledge of social challenges in the Atlantic area		Exchanging best practice on enhancing the <u>health, social inclusion and wellbeing</u> of coastal populations and developing appropriate and usable marine socio-economic indicators to measure, compare and follow trends in the development of the blue economy;	4.1.A Exchanging best practice on enhancing the health, social inclusion and wellbeing of coastal populations and developing appropriate and usable marine socio-economic indicators to measure, compare and follow trends in the development of the blue economy
PRIORITY 4: Create a socially inclusive and sustainable model of regional development	4.2 preserving and promoting the Atlantic's cultural heritage	Combating seasonality and improving prospects for SMEs through <u>diversification of maritime and coastal tourism products</u> and development of niche markets	<p>4.2.A investing in marine sport, marinas and nautical leisure activities</p> <p>4.2.B investing in port services, including those for cruise passengers</p> <p>4.2.C investing in identifying and promoting cultural and natural attractions of the Atlantic seaboard such as artisanal fishing, local cuisine and maritime heritage</p> <p>4.2.D investing in protecting and restoring tourist attractions, including coastal and underwater cultural attractions and maritime heritage sites, with archaeological, ecological or historical value following as appropriate the principles of the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage</p>

## AAP intervention logic: objectives tree

A second step is to establish the logical and causal links between the different levels of objectives of the AAP, which is most often done in the form of a graphic scheme called objectives tree. Some of the operational objectives can contribute to several specific objectives whilst some specific objectives can as well contribute to one or more priorities and vice-versa

The scheme below presents the objectives tree for the Atlantic Action Plan. Solid lines connect priorities, specific objectives and operational objectives as they are listed in the Atlantic Action Plan. Dotted lines show further links where objectives contribute to other objectives and priorities in addition to what was stipulated in the AAP.

Figure 2 - Objectives tree of the Atlantic Action Plan



### *AAP intervention logic: impact diagramme and causal links*

A major challenge to the AAP’s performance monitoring and evaluation framework is to link impact indicators tracking progress on the macro-level with actions and projects on the micro level. More specifically, the AAP’s intervention logic should clearly link:

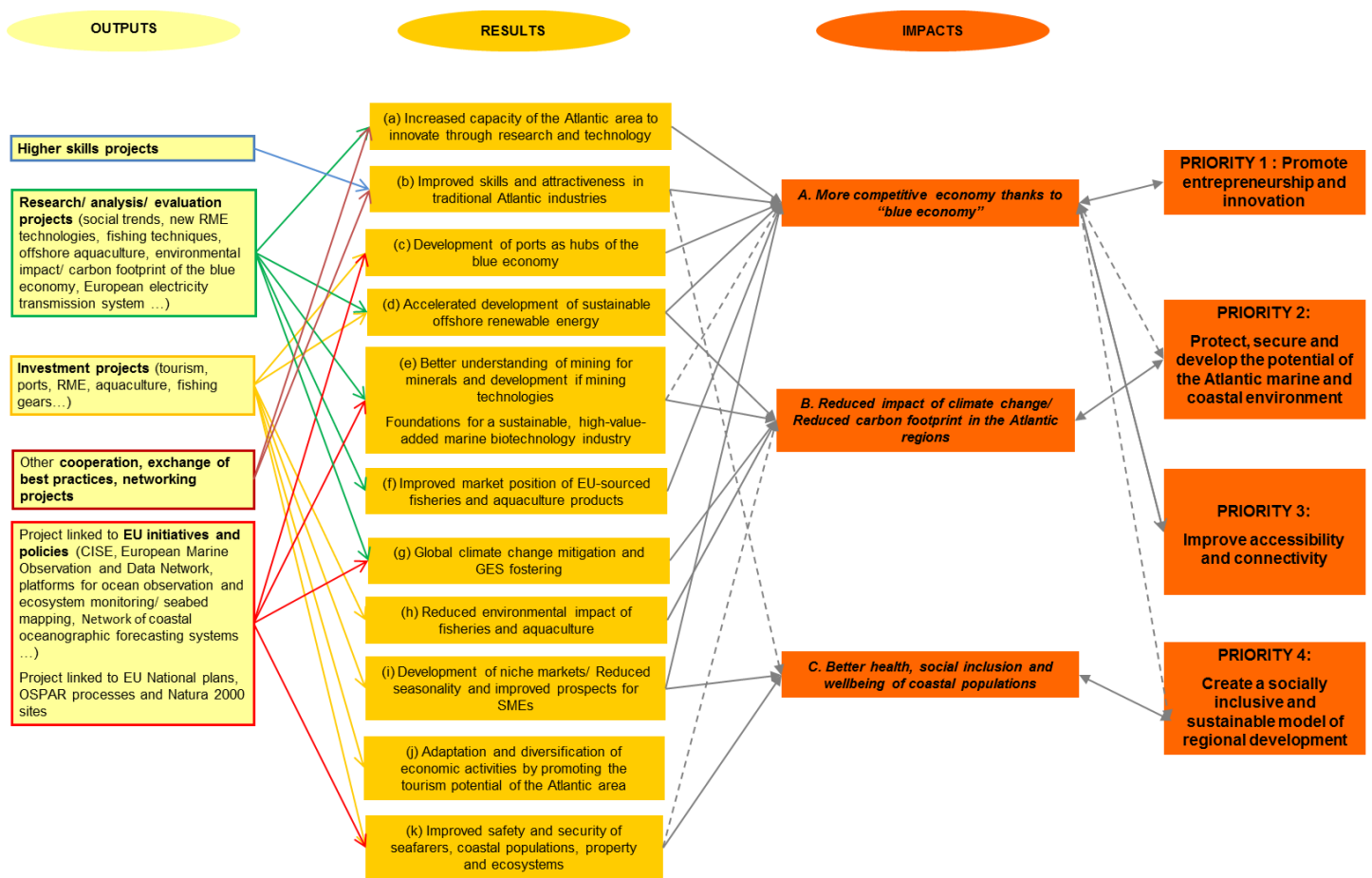
- ▶ (1) Inputs which define the financial and administrative means mobilised (e.g. EU funding sources, etc.): *no financial means have been specifically dedicated to the implementation of the AAP.*
- ▶ (2) Outputs which define what is accomplished with the means mobilized (projects and actions such as the organisation of training sessions, etc. as e.g. number of investment projects in marinas).
- ▶ (3) Results which correspond to the initial benefits arising from the AAP, normally measurable at the level of the project and actions but otherwise measurable at sectoral/ specific level (e.g. tourist visits attracted by new marinas)
- ▶ (4) Impacts which depict the indirect effects at the level of the AAP as a whole (e.g. improvement of the environment in Atlantic areas, etc.).

The so called “intervention logic” shown below presents the logical chain where expected outputs determine what intermediate results and indirect impact will be sought during the lifecycle of the Atlantic Action Plan. It shows that the 5 types of outputs can contribute to several results, which in turn may contribute to several impacts. The arrows and frames of the outputs are colored to facilitate reading the diagramme. As in the previous figure, results are linked to impacts either with solid arrows (showing direct links as stipulated in the Atlantic Action Plan) and dotted arrows, which show how results contribute to impacts beyond what is stipulated in the Atlantic Action Plan.

- ▶ **Outputs:** within the AAP, they mostly correspond to investment projects, research projects (including surveys, studies, assessments, etc.) and projects aiming at developing high skills. They also relate to networking/ cooperation projects and projects linked to the implementation of EU specific measures or initiatives within the IMP or other policy framework. Whilst their exact content is listed in the Atlantic Action Plan under the different priorities and specific objectives, they can be grouped in different types of projects:
  - Research projects (regional/national/cross-border/transnational, between researchers and companies...) – mainly funded through the EU Horizon 2020 programme, ESF programmes, and national/ regional funding;
  - Investment projects (regional/national/cross-border/transnational) – mainly funded through ERDF and EMFF programmes, European Investment Bank, and national/ regional or private funding.
  - Higher skills (regional/national/cross-border/transnational) – mainly funded through ESF and EMFF programmes, LIFE+, and national/ regional funding.
  - Networking/ cooperation: EU specific – mainly funded through ESI funds.
  - Other project: best practices sharing, etc.
- ▶ **Results:** overall, AAP expected results correspond to AAP specific objectives. However, some of them have been grouped as they contribute to the same sort of result, whilst other have been split to better reflect the different types of expectations.
- ▶ **Impacts:** At impact level, AAP monitoring framework should reveal the “breakdown of the blue economy” in the Atlantic area and should be related to Economic Growth, Jobs and Environment.



Figure 3 - Intervention logic of the Atlantic Action Plan



### Atlantic Action Plan: geographical scope

In line with the Atlantic Action Plan<sup>1</sup>, the present report, as well as the Baseline Report, targets the Atlantic coastal areas in 5 Member States - France, Ireland, Portugal, Spain and the United Kingdom. This area covers the following regions (NUTS-2):

- ▶ **Spain:** Galicia, Principado de Asturias, Cantabria, Navarra, País Vasco, Andalucía, Canarias
- ▶ **France:** Haute-Normandie, Basse-Normandie, Pays-de-la Loire, Bretagne, Poitou-Charentes, Aquitaine;
- ▶ **Ireland:** Border, Midland and Western, Southern and Eastern;
- ▶ **Portugal:** Norte, Algarve, Centro, Lisboa, Alentejo; Açores and Madeira
- ▶ **United Kingdom:** Cumbria, Cheshire, Greater Manchester, Lancashire, Merseyside, Gloucestershire, Wiltshire and North Somerset, Dorset and Somerset, Cornwall and Isles of Scilly, Devon, West Wales and The Valleys, East Wales, South Western Scotland, Highlands and Islands, Northern Ireland.

The two reports refer to these regions as ‘Atlantic regions’, and as the ‘Atlantic area’ when discussing them from an overall perspective.

<sup>1</sup> COM(2013) 279, *Action Plan for a Maritime Strategy in the Atlantic Area. Delivering smart, sustainable and inclusive growth.*

## 2 Overview of the monitoring approach

### 2.1 Definition of indicators

In order to judge whether the intervention logic in practice will bring the benefits as intended, it is necessary to define and use indicators. An indicator aims to measure an objective to achieve: an output accomplished and a result or impact obtained. Three levels of indicators have been defined to set an AAP performance framework. Each level can be linked to the AAP intervention logic:

- ▶ **Output indicators** measure progress achieved by the projects. The overall progress they indicate should have a positive effect on the results indicators. The most common indicator in this category is the number of projects financed by European funds for a given operational objective or the amount of financing itself. Some objectives cannot be monitored and evaluated through numerical values (e.g. if an assessment or mapping were conducted or development of a specific EU platform): In this case, it is further suggested to monitor these outputs through qualitative indicators, which take a qualitative value such as for example Yes / No.
- ▶ **Results indicators** measure the effects of the projects on a specific dimension. The overall progress of results indicators should have an effect on the impact indicators (i.e. creating a shift at macro level). These indicators are designed to the result of the specific objectives.
- ▶ **Impact indicators** are macro indicators which measure how the situation evolved at an overall level. They represent the consequences of the action plan beyond its direct and immediate interaction with addressees or recipients ; they represent goals of the Atlantic strategy policy and relate to AAP general objectives.

### 2.2 Methodology for defining the performance measurement framework

#### *Objectives of the performance measurement framework*

The performance measurement framework aims to define a set of relevant indicators which best reflect the progress made towards achieving the objectives of the AAP at the different levels and allow answering following questions:

- What are the main outputs linked to the operational objectives of the AAP?
- What are the results achieved in the Atlantic regions in line with the specific objectives of the AAP?
- To what extent are the general objectives of the AAP achieved?

#### *Methodological steps followed to select the list of relevant indicators*

Our approach followed the following steps:

- ▶ 1. Review of the intervention logic of the AAP (*see chapter 1*)
- ▶ 2. Identification of potential indicators aligned with expected outputs, results and impacts of the AAP (*see appendix: list of indicators*)
- ▶ 3. Assessment of the quality of each indicator according to RACER criteria and review of existing sources

***Preliminary definitions of the quality criteria for defining indicators:***

*The quality of an indicator depends on following criteria:*

- ▶ **Relevant – i.e. closely linked to the objectives to be reached**
- ▶ **Accepted – e.g. by staff and stakeholders**
- ▶ **Credible for non experts, unambiguous and easy to interpret**
- ▶ **Easy to monitor (e.g. data collection should be possible at low cost)**
- ▶ **Robust – e.g. against manipulation**

- ▶ 4. At impact and result level:
  - Shortlist of “preferred” indicators (ie. key indicators), mainly based on following two key criteria: relevance and availability of information/ easiness to monitor. These key indicators focus on result and impact indicators that can be easily monitored through existing databases and monitoring systems. A “gap analysis” has then been performed to identify data gaps which require additional data collection to be carried out on an “ad hoc” basis (specific interviews, surveys, etc.). Most of these gaps can be tackled on the output level through observing the number of projects or specific initiatives, the volume of investment etc. (see Output indicators in section 3.3 of the report)
  - Elaboration of a data collection methodology for each selected key indicator through a detailed description of its characteristics, sources and ways to overcome potential limitations (see detailed indicators' profiles in section 4 of the report)
- ▶ 5. At output level: description of a complete set of potential quantitative and/or qualitative indicators and presentation of their sources (primary and secondary) (see section 3.3 of the report).

### *Key considerations*

- ▶ No target values were set in the AAP. However, the monitoring framework of the AAP should allow DG MARE to provide Member States (and the Leadership group) a picture of what the AAP might have contributed to, by trying to link some micro/ localized outputs/ projects to macro indicators (such as the GDP growth rate).
- ▶ No ex-ante evaluation was performed that allowed checking the coherence and internal consistency of the AAP
- ▶ No specific funding instruments are directly linked to the Atlantic Action Plan, although many of the existing EU funding instruments offer financing opportunities for projects in line with the priorities and objectives of the Atlantic Action Plan; there is no certainty that outputs, results and impacts measured in the Atlantic regions are only linked to the implementation of the AAP.
- ▶ Incomplete overview, at the date of writing of this report (beginning of 2014), of monitoring arrangements defined to follow the implementation of EU funds and programmes: each fund has its own monitoring arrangements, including the definition of common or programme-specific outputs, results and impacts indicators, and dedicated monitoring tools that can be centralized at DGs' level or solely decentralized in the different Member States. It has to be noted that:
  - At the time of the elaboration of this document, these arrangements are not fully defined yet; apart from the European Regional Development Fund (ERDF) and the European Social Fund (ESF), there remain uncertainties as regards the exact list of common indicators that will be followed by the different managing authorities
  - As agreed with DG MARE, no specific interviews were performed by the evaluators.

## 2.3 Identification of existing sources

### Overview

The following overview gives a summary of potential existing sources to feed the indicators of the AAP. These sources are twofold:

► **Secondary data, ie. data from existing sources**

	<b>At EU level</b>	<b>At national / regional level</b>
<b>Available statistics:</b>	<ul style="list-style-type: none"> <li>- Eurostat</li> <li>- ESF / ERDF / EMFF core and common indicators</li> <li>- European Wind Energy Association</li> <li>- European Atlas of the Seas</li> <li>- International tanker owners pollution federation</li> <li>- EMSA</li> <li>- Lloyd’s register</li> <li>- ICES</li> <li>- JRC</li> <li>- OSPAR</li> </ul>	<ul style="list-style-type: none"> <li>- National statistics institutes</li> <li>- National and local associations (fisheries,...)</li> </ul>
<b>Studies:</b>	<ul style="list-style-type: none"> <li>Evaluation reports and studies</li> <li>MARNET Observatory</li> <li>Ocean Energy Europe</li> </ul>	<ul style="list-style-type: none"> <li>National statistic institutes</li> </ul>

► **Primary sources, ie. that require some data collection work through interviews to receive specific data or qualitative insights:**

	<b>At EU level</b>	<b>At national / regional level</b>
<b>Authorities/ agencies</b>	<ul style="list-style-type: none"> <li>- European Commission: DG Environment, DG Education, DG Mobility, DG Regional policy, DG Research, DG Enterprise, DG Employment</li> <li>- Members of the Task force on Maritime Employment and competitiveness</li> <li>- EU Agencies: Europol</li> <li>- Innovation &amp; Networks Executive Agency</li> </ul>	<ul style="list-style-type: none"> <li>- National ministries in charge of industry, entrepreneurship or R&amp;D / cluster development agencies or association</li> <li>- National ENIC-NARIC agencies and/or ministries of education</li> </ul>
<b>Industry associations</b>	<ul style="list-style-type: none"> <li>- EMOD</li> <li>- ENIC-NARIC</li> <li>- European Fish Processors Association and similar national / regional associations</li> <li>- European Network of</li> </ul>	

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	Transmission System Operators for Electricity - European Wind Energy Association - Ocean Energy Europe
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## 2.4 Limitations linked to the shortlisting of indicators

Two main criteria have been used to shortlist a sample of indicators to monitor the progress made in implementing the APP:

- ▶ **Easiness to collect data.** Although no constraint in terms of resources available was first considered during the definition of a complete list of indicators as part of AAP performance framework, shortlisted “key indicators” are mostly already tracked and easily available in existing statistical databases, monitoring systems or regular surveys/ studies performed at EU level. Output indicators for which additional surveys or interviews would have to be conducted have been listed in appendix.
- ▶ **Relevance.** Indicators have to depict in the best possible way the situation in Atlantic regions and maritime issues. However, most indicators are faced with two major limitations:
  - Geographical limitation: comparable statistical data is mostly available on a regional basis (NUTS2) in order to isolate the impact on the marine / Atlantic coast. But, in some cases, data is available only at the national level. As a consequence, when screening cross-border and transnational projects, it proves challenging to separate the contribution of the Atlantic area in the overall performance of a country.
  - Thematic limitation: while data is available on an aggregate level (for example the number of enterprises cooperating with research institutes), it is virtually impossible to isolate the share of the maritime sector. In certain areas, such as research or renewable energies, indicators may measure a general results and not the exact contribution of projects related to the AAP.

NB: specific limitations regarding indicators from ERDF, ESF and EMFF programs:

- ▶ **Data unavailable:** Even for compulsory indicators (as proposed by the EU regulation on ERDF/ESF operational program), it is not sure that all managing authorities will monitor all the indicators. As for non-compulsory indicators, although they are highly recommended to allow comparison and benchmarking between managing authorities, managing authorities are free to choose them or define their own indicators. As a consequence, regarding ERDF indicators, data may not be available for every NUTS2 territory of the Atlantic Area.
- ▶ **Inappropriate frequency of data collection:** regarding ERDF results indicators, data will only be collected at the beginning, to define the baseline situation, and after the end of the program,
- ▶ **Traceability:** Not all operational funds necessarily have a suitable database enabling to search among financed projects according to criteria which would enable an easy identification of projects relevant to the Atlantic Action Plan.
- ▶ **Limited comparability:** indicators’ titles contain concepts that could be understood in different ways (for example the definition of SMEs is different across member states).

### 3 Overview of indicators linked to the AAP

The following tables provide an overview of the impact, results and output indicators defined by the consultant for the monitoring of the Atlantic Action Plan.

An overview of impact and result indicators is presented in sections 3.1 and 3.2. To facilitate the orientation between the two tables and the Indicator profiles, impact and results indicators were assigned numbers. The indicators are ordered along the Intervention logic (Figure 3 above). For each of the impact and results indicators, a detailed “Indicator’s profile” is provided in section 4 of this report, including their link to the Atlantic Action Plan, precise definitions of terms and sources of data, geographical relevance, collection frequency and limitations.

A list of suggested output indicators is provided in section 3.3. They are ordered along the operational objectives defined in the Atlantic Action Plan. The table also includes suggested sources for collecting data for these indicators.

#### 3.1 Key impact indicators

Based on the methodology defined in section 2.1 of this report, six impact indicators are considered as key indicators:

Expected impact	Number of indicator	Name of the indicator <i>(in yellow : indicators chosen for monitoring the AAP)</i>	Unit	Potential source (provider)	Related AAP priority / specific objective
More competitive economy thanks to “blue economy”	1	<b>GDP in Atlantic regions</b>	€ / inhabitant	Eurostat	All priorities Focus: Priority 1
	2	<b>Enterprise birthrate</b>	Number of enterprises	Eurostat	
Reduced impact of climate change/ Reduced carbon footprint in the Atlantic regions	3	<b>Greenhouse gas (GHG) emissions in the Atlantic area</b>	CO2 equivalents	Eurostat	PRIORITY 2: Protect, secure and develop the potential of the Atlantic marine and coastal environment
Better health, social inclusion and wellbeing of coastal populations	4	<b>Unemployment rate</b>	unemployment rate	Eurostat	PRIORITY 4: Create a socially inclusive and sustainable model of regional development
	5	<b>Employment rate</b>	% of population	Eurostat	
	6	<b>Life expectancy at birth</b>	mean number of years	Eurostat	

## 3.2 Key result indicators

Based on the methodology defined in section 2.1 of this report, 28 indicators are considered as key indicators:

Expected result		Name of the indicator	Unit	Potential source (provider)	Related AAP priority / specific objective
Increasing the capacity of the Atlantic area to innovate through research and technology	7	Number of enterprises cooperating with research institutions	Number of enterprises	DG REGIO	1.1
	8	Number of research institutions participating in cross-border, transnational or interregional research projects	Number of organisations	DG REGIO	1.1
	9	Total intramural R&D expenditure (GERD)	% of GDP	Eurostat	1.1
	10	Patent applications to the EPO by priority year	Number of applications per million of inhabitants	Eurostat	1.1
Improving skills and attractiveness in traditional Atlantic industries	11	Employment in technology and knowledge-intensive sectors	% of total employment	Eurostat	1.2
Development of ports as hubs of the blue economy	12	Volume of short-sea shipping in the Atlantic area	thousands of tonnes	Eurostat	3.1
	13	Number of short sea routes	Number	European Atlas of the Seas	3.1
	14	Completion status of TEN-T infrastructure priority projects	Percentage	TEN-T: Progress report – Implementation of the TEN-T Priority Projects	3.1
	15	Number of cruise passengers	thousands of passengers	Eurostat	3.1
	16	Maritime transport of freight	1000 tonnes	Eurostat	3.1
Accelerated development of sustainable offshore renewable energy	17	Share of energy from renewable sources	% gross final energy consumption	Eurostat	2.4
	18	Off-shore wind energy production capacities	MW	EWEA	2.4
	19	Supply, transformation, consumption – renewables (hydro, wind, photovoltaic)	Gigawatt hour	Eurostat	2.4
Better understanding of mining for minerals and development of mining technologies Foundations for a sustainable, high-value-added marine biotechnology industry	20	Non renewable resource extraction	m <sup>3</sup> /toeq	JRC, OSPAR	2.2
	21	Biotechnology patent applications to the EPO (by priority year and NUTS 3 region)	Number of patent applications	Eurostat	2.2
Improved market position of EU-sourced fisheries and aquaculture products	22	Aquaculture production	tonnes live weight	Eurostat	1.3
Global climate change mitigation and GES fostering	23	Protection of marine and coastal environment	Target met/not met	ICES, OSPAR	2.2 / 2.3
	24	Marine protected sites	superficie km <sup>2</sup> / nb of sites / % in costal area	EEA	2.3
	25	Compliance with the Marine Strategy Framework Directive	True / False	DG-ENV	2.3
Reduced environmental impact of fisheries and aquaculture	26	Fisheries - Variety of species	tonnes live weight	Eurostat	1.3
Diversification of maritime and coastal tourism products and development of niche markets/ Reduced seasonality and improved prospects for SMEs	15	Number of cruise passengers	thousands of passengers	Eurostat	3.1 / 4.2



Expected result		Name of the indicator	Unit	Potential source (provider)	Related AAP priority / specific objective
Adaptation and diversification of economic activities by promoting the tourism potential of the Atlantic area	27	Nights spent at tourist accommodation establishments in coastal regions	number of nights	Eurostat	4.2 / 1.3
	28	Increase in expected number of visits to supported sites of cultural and natural heritage and attractions	visits/year	DG REGIO	4.2 / 1.3
Better safety and security of seafarers, coastal populations, property and ecosystems	29	Number of vessels involved in accidents across the Atlantic Area	number	EMSA - Maritime Accident Review	2.1
	30	Number of non-indigenous species	Number	OSPAR QSR	2.1
	31	Flood directive: compliance with the article 6 (risk maps) and later 7 (FRMP)	True / False	DG-ENV	2.1
	32	Oil response vessels	No. of ships, capacity (m3)	European Atlas of the Seas, EMSA	2.1
	33	Oil spills	tonnes	International tanker owners pollution federation Itm (or EMSA, Atlas of the European Sea, Lloyd's register, EEA)	2.1

### 3.3 Output indicators

The following table shows suggested output indicators, as well as their type (quantitative / qualitative) and the source of information (or collection tool) from which data could be obtained.

For each of the operational objectives, one or several corresponding types of efforts were identified as indicated in the table, which then facilitated the definition of the most suitable output. The Atlantic Action Plan indicates 3 types of “efforts” to be undertaken in order to enable the blue economy to reach its potential in the Atlantic area – targeted investment, increasing research capacity and higher skills. The Atlantic Action Plan also identifies some of the financial resources among the European funds and other bodies (European Investment Bank) which could be used for implementing these efforts. A fourth category (Other) was also added during the elaboration of this report to capture further types of efforts such as networking, networking, knowledge sharing, communication, risk assessment, monitoring mechanisms, assessment. Some of the objectives may be linked to several types of efforts at once: for example research and networking for operational objective 1.1.

The column “Sector (if any)” indicates sectors to which operational objectives of the Atlantic Action Plan refer to, for example fisheries, marine renewable energies, ports etc. On the contrary, other operational objectives do not directly refer to a specific sector and therefore a dash was marked in the sector column.



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Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
	Investment	Research	Skills	Other				
1 1.1.A networking and co-operative research between research centres, higher education and business in the Member States;		X		X (networking)	-	Number of EU-wide research projects with financing granted through HORIZON 2020 / LIFE+ with at least 1 participant from the Atlantic area.	Quantitative	Desk research / Interviews with DG Research and Innovation (for HORIZON 2020), DG Environment (LIFE+)
						Number of INTERREG projects in the Atlantic area involving transfer of knowledge and insights between higher education, business and research	Quantitative	Desk research / Interviews with OP managing authorities
2 1.1.B transferring knowledge and insights, as well as skills between higher education, business and research, including through regional, national and cross-border maritime clusters and technology platforms		X		X (networking)	-	Number of workshops / conferences organized in Atlantic regions with the aim of transferring knowledge and skills	Quantitative	Interview with regional authorities of Atlantic regions Interview with managing authorities of EU programmes
						Number of regional, national and cross-border maritime clusters and technology platforms (new/ existing)	Quantitative	European Cluster Observatory data Interviews with national and regional authorities of Atlantic regions
3 1.2.A putting in place educational and training measures, including crossborder programmes and mutual recognition of national education and training programmes					-	Existence of universities/ industries cooperation programmes on the regional, national and cross-border	Qualitative	Interview with regional authorities of Atlantic regions (limited knowledge in France for instance) Interview with managing authorities of EU programmes
						Existence of measures for mutual recognition of national education and training	Qualitative	Interviews with national offices of the ENIC-NARIC network
			X	X		Number of INTERREG / EMFF projects aiming at putting in place new educational and training measures in the Atlantic area	Quantitative	Desk research / interviews with managing authorities of OPs
						Number of INTERREG projects aiming at putting in place new measures aiming at improving the mutual recognition of national education and training programmes	Quantitative	Desk research / interviews with managing authorities of OPs
						Number of participants of the Leonardo da Vinci Mobility programme from the Atlantic area	Quantitative	Interview with DG Education
						Number of Leonardo da Vinci educational projects related to sectors of the maritime economy (fishing, aquaculture, shipbuilding)	Quantitative	Interview with DG Education

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Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
	Investment	Re-search	Skills	Other				
4				X	-	Implementation of the recommendations of the Task Force on Maritime Employment and Competitiveness	Qualitative	Interview with DG Mobility and members of the Task Force on Maritime Employment and Competitiveness
						Number of INTERREG / EMFF projects in the Atlantic area aiming at raising awareness about sea-related careers / generating enthusiasm for marine culture and careers	Quantitative	Interviews with managing authorities of OPs and national managing authorities of the EMFF
5		X	X		Fisheries	Number of INTERREG projects in the Atlantic area aiming at multi-species modelling, fishing gear and related techniques and technologies so as to minimise carbon footprint, seabed damage, discards and by-catch	Quantitative	Desk research / Interviews with managing authorities of Operational programmes (for INTERREG)
						Number of projects financed by Horizon 2020 / LIFE+ in the Atlantic area in the field of multi-species modelling, fishing gear or related techniques.	Quantitative	Desk research / Interviews with DG Research and Innovation (for HORIZON 2020) / DG Environment (LIFE+)
						Number of INTERREG projects in the Atlantic area relating to the development of technologies to minimise carbon footprint, seabed damage, discards and by-catch been developed in the Atlantic area	Quantitative	Desk research / Interviews with managing authorities of Operational programmes (for INTERREG)
						Number of projects financed by Horizon 2020 in the Atlantic area relating to the development of technologies to minimise carbon footprint, seabed damage, discards and by-catch been developed in the Atlantic area	Quantitative	Desk research / Interviews with DG Research and Innovation (for HORIZON 2020) / DG Environment (LIFE+)
6			X	X (knowledge sharing)	Fisheries	Number of workshops / seminars / on-line tools (website, forum,...) financed through EU programmes for fisheries managers to improve their understanding of the socio-economic and ecosystem impacts of management measures	Quantitative	Interviews with regional managing authorities of operational programmes and the national managing authorities of EMFF Interview with ICES

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	Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
		Investment	Re-search	Skills	Other				
7	1.3.C carrying out research to improve the growth, productivity, competitiveness and environmental sustainability of aquaculture (including offshore aquaculture) and the industry's ability to respond to market needs					Aquaculture	Number of INTERREG projects in the Atlantic area relating to research to improve the growth, productivity, competitiveness and environmental sustainability of aquaculture (including offshore aquaculture) and the industry's ability to respond to market needs	Quantitative	Desk research / Interviews with managing authorities of Operational programmes (for INTERREG)
			X				Number of projects financed by EMFF / Horizon 2020 / LIFE+ in the Atlantic area relating to research to improve the growth, productivity, competitiveness and environmental sustainability of aquaculture (including offshore aquaculture) and the industry's ability to respond to market needs	Quantitative	Interview with national managing authorities of the EMFF and DG MARE
							Number of enterprises that introduced new or significantly improved products in the field of aquaculture, new to the market as a result of supported innovation or R&D projects	Quantitative	Desk research / Interviews with DG Research and Innovation and DG ENV (for HORIZON 2020)
							Number of enterprises that introduced new or significantly improved products, new to the firm as a result of supported innovation or R&D projects in the field of aquaculture*	Quantitative	Data to be obtained from DG REGIO monitoring system (ERDF core indicator) and completed through specific interviews with cluster authorities
8	1.3.D improving the market position of EU-sourced fisheries and aquaculture products by improving processing, labelling, traceability and certification.				X (communication)	Fisheries and aquaculture	Volume and share of EU-sourced fisheries and aquaculture products in the EU market and the global market.	Quantitative	Eurostat / FAO – INFOFish Network
							Number of INTERREG projects aiming improving processing, labelling, traceability and certification	Quantitative	Desk research on websites / Interviews with Managing Authorities of Operational Programmes
							Number of EMFF projects aiming improving processing, labelling, traceability and certification	Quantitative	Desk research in database of EMFF / Interviews with the national managing authorities of EMFF and DG MARE
9	2.1.A evaluating and extending as necessary existing warning, reporting and response mechanisms for invasive and harmful marine species		X		X (risk assessment)	-	Ratification of the ballast water and anti-fouling conventions	Qualitative	Data from IMO on ratification

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Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
	Investment	Re-search	Skills	Other				
and foster exchanges of best practice on how to deal with such threats						Number of projects on reporting and response mechanism evaluated	Quantitative	Information to be retrieved from research institutions or EU funds spend on projects. Contact national authorities to identify reporting systems
						Number of research project on reporting on invasive and harmful marine species	Quantitative	Contact research institutes in the region to identify projects on the management of invasive and harmful species.
						Number of research projects in the field of responses to invasive and harmful marine species	Quantitative	Contact research institutes in the region to identify projects on the management of invasive and harmful species.
<b>10</b> <b>2.1.B</b> supporting initiatives undertaken by Member States in the Atlantic, including risk assessments, coordinated response mechanisms and investments in state-of-the-art equipment that contribute appropriately to enhancing coordinated preparedness and responses to marine threats, natural disasters, marine accidents, spills of oil and hazardous material or trafficking	X	X		X (risk assessment)	-	Existence of risk assessment carried out for the region	Qualitative	The implementation of MSFD and the Flood directive National authorities on expenditures on equipment by Member States in the region
						Number of cooperation initiatives taking place in the region to improve the response to marine threats	Quantitative	Number of coordinated response mechanisms set up at both EU and MS level and across the different areas of maritime threats.
						Numbers of project investing in equipment that allows for improved to respond to marine threats	Quantitative	Interview with EUROPOL
						Number of irregular immigrants detected, intercepted and saved	Quantitative	Interview with EU border control
						Investment, number and technology level of stand-by oil response vessels and accidents (source: EMSA)	Quantitative	EMSA
						Investment and technology upgrades in satellite instruments for drug, arms and human trafficking (source: EUROSUR and MS border controls), accidents (source: EMSA), IUU fishing (source: EFCA)	Quantitative	EUROSUR, MS border controls, EMSA and EFCA

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	Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
		Investment	Re-search	Skills	Other				
11	2.1.C developing, testing and deploying new technologies to improve the inspection of vessels and enhance the safety and security of ports and shipping by better integrating data from satellites and from air, sea and land-based surveillance facilities and innovative in-situ instruments to improve situational awareness in the maritime domain	X	X			Shipping	Number of projects aiming at development, testing and deploying of technology to improve inspection of vessels	Quantitative	Number of new data integration services (from space, air, and land sources) in MS authorities (i.e. border control, fisheries control, customs) and EU agencies (source: EUROSUR, EFCA, EMSA) Contact Center for Maritime and Port Security for a status of the situational awareness in the maritime domain.
12	2.1.D helping to deliver regional sea-basin-related information services within the Common Information Sharing Environment (CISE), based on agreed EU-wide standards and experience gained by Member States in pilot projects					-	Number of projects co-funded by the EU targetin delivering regional sea-basin-related information services.	Quantitative	CISE
							Total number of shared information services in the Atlantic region	Quantitative	Horizon 2020
13	2.2.1.A using existing systems and mechanisms to develop and maintain a sustainable integrated programme for surveying and observing the coasts, seabed and water column, covering the waters of EU Member States, Outermost Regions and Overseas Countries and Territories from the coasts to the deep ocean					-	Utilisation of the knowledge and data to maintain an integrated system for surveying and observing	Qualitative	Identify research projects
							Progress on the development of Integrated Coastal Zone Management (ICZM) programmes	Qualitative	Interview with coastal municipalities
							Environmental status of seabed and water columns.	Qualitative	EEA (indicator land take)
							Number of projects following up onthe EuroSITES project.	Quantitative	Interview representatives of the EuroSITES
							Urban sprawl (Urban sprawl is synonymous with unplanned incremental urban development, characterised by a low density mix of land uses on the urban fringe and measures as physical pattern of low-density expansion of large urban areas, under market conditions, mainly into the surrounding agricultural areas) in coastal zones	Qualitative	Interview with national authorities on the progress of ICZM

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	Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
		Investment	Re-search	Skills	Other				
14	2.2.1.B developing new instruments and platforms for ocean observation and ecosystem monitoring (including seabed mapping) that increase the number of parameters that can be measured automatically, lower the costs of observation and accelerate the dissemination of data to users				X (assessment)	-	Development of new instruments to observe ocean and ecosystem monetisation	Qualitative	Interview national authorities about the implementation of the MSFD monitoring program
							Number of new instruments funded by EU to observe and monitor the ecosystem	Quantitative	Identify platforms for observing and monitor ecosystem either through interviews with research institutes, stakeholder associations National authorities information on the cost for monitoring the status of the ecosystem
							Number of active participants on the platforms	Quantitative	Identify platforms for observing and monitor ecosystem either through interviews with research institutes, stakeholder associations National authorities information on the cost for monitoring the status of the ecosystem
							Number of users of the platforms	Quantitative	Identify platforms for observing and monitor ecosystem either through interviews with research institutes, stakeholder associations National authorities information on the cost for monitoring the status of the ecosystem
15	2.2.1.C contributing to a more effective stewardship, cataloguing and distribution of interoperable marine data and a multi-resolution seabed map through contributions to a European Marine Observation and Data Network				X (assessment)	-	Establishing of a comprehensive catalogue containing marine data and multi resolution seabed maps	Qualitative	Interview managing authorities in the region or member states
							Number of projects to support the stewardship of data funded or co-funded by EU.	Quantitative	Interview managing authorities in the region or member states

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	Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
		Investment	Re-search	Skills	Other				
							Number of projects developing catalogue with data and/or maps funded or co-funded by EU.	Quantitative	Interview managing authorities in the region or member states
16	2.2.1.D developing a network of coastal oceanographic forecasting systems (including risk assessments) that build on the Copernicus marine service.				X (risk assessment)	-	Number of networks developed on coastal oceanographic forecasting systems	Quantitative	Interview with representatives of Copernicus ( <a href="http://www.Copernicus.eu/">http://www.Copernicus.eu/</a> )
							Number of existing systems which were attached to the network during the 2014-2020 period	Quantitative	Interview with representatives of Copernicus ( <a href="http://www.Copernicus.eu/">http://www.Copernicus.eu/</a> )
							Percentage of the region covered by the network	Quantitative	Interview with representatives of Copernicus ( <a href="http://www.Copernicus.eu/">http://www.Copernicus.eu/</a> )
17	2.2.2.A supporting an assessment of the carbon footprint of the blue economy in the Atlantic area		X		X	-	Number of projects funded or co-funded by EU funds supporting the assessment of carbon footprint of the blue economy in the region? (Note: not necessary relevant to do isolated for each region...)(programming for the coming period)	Quantitative	Data are gathered at national level and aggregated sectors (source: national statistics) United Nations Framework Convention on Climate Change - the Kyoto Protocol, and - the European Union (DG-CLIMATE)
18	2.2.2.B develop a platform for exchanging best practice on emissions reduction and energy efficiency		X		X (networking)	Energy	Number of users connected to platforms designed to share best practise on emissions reduction and energy efficiency.	Quantitative	Identify platforms through interviews and Internet search
							Number of projects funded or co-funded to develop a platform for exchanging best practice on emissions reduction and energy efficiency	Quantitative	Interview with DG REGIO about INTERREG project
19	2.2.2.C developing co-operative partnerships to identify and monitor the impacts of global climate change on marine activities, ecosystems and coastal communities in the Atlantic area, including developing better predictive and risk assessment capabilities				X (networking)	-	Number of projects involving more than one institution / more than one region and aiming at developing knowledge and tools on climate change	Quantitative	Interview with research institutes in the Atlantic region and regional authorities Interview with managing authorities
			X				Number of workshops / meetings to share knowledge and tools on climate change	Quantitative	Interview with research institutes in the Atlantic region and regional authorities Interview with managing authorities
							Number of partnership agreements between research institutions on climate change knowledge	Quantitative	Interview with research institutes in the Atlantic region and regional authorities Interview with managing authorities

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	Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
		Investment	Re-search	Skills	Other				
							Number of projects supporting the development of partnership about climate change on marine change	Quantitative	Interview with research institutes in the Atlantic region and regional authorities Interview with managing authorities
20	2.2.3.A continuing to build on national plans, OSPAR processes and Natura 2000 sites to help develop a coherent network of Marine Protected Areas for Europe's Atlantic coast by agreeing on good practices and shared evaluation processes that could also benefit Macaronesia and the Outermost Regions in the Caribbean					-	Number of projects assessing if the MPA appointed are coherent.	Quantitative	Interview national authorities to determine the level of coordination of the management of MPA.
			X		X (assessment)		Number of projects identifying mission MPA in order to have a coherent network	Quantitative	Interview national authorities to determine the level of coordination of the management of MPA.
							Number of coordination initiatives between neighbouring countries	Quantitative	Interview national authorities to determine if a process for sharing and coordination has been set up and to determine the activity.
							Number of formulated processes for sharing and coordination (including agreements on good practise and how to evaluate)	Quantitative	Interview national authorities to determine if a process for sharing and coordination has been set up and to determine the activity.
							Coordination of the process of setting up a monitoring program between the five countries	Qualitative	Contact national authorities to determine the level of coordination of the monitoring of the ecosystem.
21	2.2.3.B encouraging further cooperation between Member States, including through OSPAR, for example on coordinated and integrated monitoring programmes and joint action to restore ecosystems		X		X	-	The process of implementing MSDF should be followed and is the most likely that OSPAR is used for this coordination.	Quantitative	Contact OSPAR to determine the level of coordination of the monitoring of the ecosystem.
22	Assessing the social and economic value and functioning of the Atlantic's ecosystems and biodiversity in order to support decision-making		X			-	Number of projects aiming at performing studies on the social and economic value and function of the Atlantic's ecosystem and biodiversity with outcomes aiming at supporting decision-making	Quantitative	Horizon 2020 / LIFE+
23	Contributing to Member States maritime spatial planning and integrated coastal management processes, for example by sharing best practice and facilitating cross-border coordination.				X (knowledge sharing)	-	Number of projects for sharing best practices and facilitating cross-border coordination on maritime spatial planning and integrated coastal management processes	Quantitative	Horizon 2020 / LIFE+/EMFF



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	Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
		Investment	Research	Skills	Other				
24	Developing a better understanding of the technical feasibility, economic viability and environmental impact of mining for minerals in the Atlantic Ocean, and develop and test innovative mining technologies		X		X (networking)	Mining	Number of projects enabling to develop and test innovative mining technologies	Quantitative	Horizon 2020
25	2.3.A Exploring the seafloor and assessing its genetic make-up, biodiversity and potential for providing material for the biotechnology industry, taking account of applicable international law and the need to protect the marine environment		X			Biotechnology	Number of research project about the assessing the seafloor	Quantitative	Inquire information from the sector utilising resources retrieved from the seafloor
							Turnover in sectors dependent on the provision of resources from the seafloor	Quantitative	Interview with relevant business association like: <a href="http://www.biomarine.org/biomarine-international-clusters-association/">http://www.biomarine.org/biomarine-international-clusters-association/</a> <a href="http://www.aggbusiness.com/">http://www.aggbusiness.com/</a>
26	2.3.B strengthening links between research and industry in the Atlantic area in order to develop biobanks and identify markets for innovative marine bioproducts (biomedicine, tissue engineering, pharmaceuticals, industrial enzymes) and focusing research on delivering industrial processes for manufacturing them		X			Biotechnology	Number of project co-funded by EU where research and industries are involved together	Quantitative	Horizon 2020 / LIFE+
							Number of projects about metric resources and how they can be exploited and utilised in industrial processes.	Quantitative	Horizon 2020 / LIFE+
27	2.4.A encouraging assessment and mapping of the potential of the European Atlantic Ocean's energy resource and determining how to mitigate the environmental and navigational impact of the construction, operation and decommissioning of installations as part of regional Smart Specialisation Strategies for offshore renewable energy		X			Renewable marine energy	Existence of studies conducted to assess and/or map the potential of the European Atlantic Ocean's energy resource for the Atlantic area as a whole and for each of the regions of the Atlantic area	Qualitative	Interview with national renewable energy association / energy regulation authority
							Number of preliminary impact studies have been conducted on the mitigation of environmental and navigational impact of the construction, operation and decommissioning of installations as part of regional Smart Specialisation Strategies for offshore renewable energy	Quantitative	Interview with national renewable energy association / energy regulation authority
							Member States implemented legal measures for these compulsory preliminary impact studies	Qualitative	Interview with national renewable energy association / energy regulation authority

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	Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
		Investment	Re-search	Skills	Other				
28	2.4.B contributing to a European electricity transmission system that allows the balancing of loads between national systems and provides better links between offshore and onshore energies					Renewable marine energy	Number and capacity of links among Member States of the Atlantic area and between Member States of the Atlantic area and other EU States	Quantitative	Interview with ENSOE – European Network of Transmission System Operators for Electricity and DG ENERGY
							Volume of funding granted by the European Investment Bank on electricity transport projects in the countries of the Atlantic Area	Quantitative	Interview with / Desk research in databases of the EIB
29	2.4.C promoting research, development and demonstration of technologies for the construction and maintenance of renewable energy installations for offshore wind, wave, tidal and biomass energies including integration with desalination plants and multipurpose offshore platforms;	X	X			Renewable marine energy	Number of ERDF projects in the Atlantic area financed in the field of research, development and demonstration of technologies for the construction and maintenance of renewable energy installations for offshore wind, wave, tidal and biomass energies including integration with desalination plants and multipurpose offshore platforms	Quantitative	Desk research / Interviews with managing authorities of Operational programmes
							Number of projects financed by Horizon 2020 in the Atlantic area financed in the field of research, development and demonstration of technologies for the construction and maintenance of renewable energy installations for offshore wind, wave, tidal and biomass energies including integration with desalination plants and multipurpose offshore platforms	Quantitative	Desk research / Interviews with DG Research and Innovation (for HORIZON 2020) and DG ENERGY
30	2.4.D encouraging the harnessing of the special geological, oceanographic and meteorological conditions of the Outermost Regions of the Atlantic in order to help them achieve energy self-sufficiency and meet carbon emission reduction targets	X				Renewable marine energy	Number of projects for the construction of energy renewable production installations in outermost regions of the Atlantic area  Amount of EU funding instruments contribution to these projects	Quantitative	DG REGIO (ERDF) / European Investment Bank
31	3.1.A facilitating upgrades of infrastructure to improve connectivity with the hinterland, enhance intermodality and promote fast turnaround of ships through measures such as provision of shore side electricity, equipping ports with liquefied natural gas refuelling capacity and tackling administrative bottlenecks	X				Ports	Number of projects improving port infrastructure supported by EU funds.	Quantitative	Review EU financed projects in leading regions and ports Review projects funded by e.g. the Innovation & Networks Executive Agency

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	Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
		Investment	Re-search	Skills	Other				
32	3.1.B enabling ports to diversify into new business activities such as the maintenance of offshore renewable energy installations or tourism	X				Ports	Number of projects improving port infrastructure supported by EU funds	Quantitative	Review EU financed projects in leading regions and ports Review projects funded by e.g. the Innovation & Networks Executive Agency
33	3.1.C analysing and promoting port networks and short-sea shipping routes between European ports, within archipelagos and to the coast of Africa through initiatives such as Motorways of the Sea to increase seaborne traffic		X		X (assessment)	Ports	Analyses of short sea shipping routes completed	Qualitative	Review of studies undertaken or supported by EU
34	4.1.A Exchanging best practice on enhancing the health, social inclusion and wellbeing of coastal populations and developing appropriate and usable marine socio-economic indicators to measure, compare and follow trends in the development of the blue economy		X		X (knowledge sharing)	-	At least one initiative for the exchanging best practices been put in place (website, newsletter, workshop)	Quantitative	Interviews with DG EMP / DG MARE
							Number of INTERREG projects aiming at exchanging best practices for the health, social inclusion and wellbeing of coastal populations and developing appropriate and usable marine socio-economic indicators to measure, compare and follow trends in the development of the blue economy	Quantitative	Interviews with managing authorities / Desk research in the databases of OP
35	4.2.A investing in marine sport, marinas and nautical leisure activities	X				Tourism	Volume of EU funding from the ERDF and EMFF programmes in projects linked to marine sport, marinas and nautical leisure activities	Quantitative	Interviews with managing authorities / Desk research in the databases of OP
36	4.2.B investing in port services, including those for cruise passengers	X				Tourism	Volume of EU funding from the ERDF / financing granted by EIB in port services, including those for cruise passengers	Quantitative	Interviews with / Desk research in the databases of OP managing authorities
37	4.2.C investing in identifying and promoting cultural and natural attractions of the Atlantic seaboard such as artisanal fishing, local cuisine and maritime heritage	X				Tourism	Number of projects funded from the ERDF and EMFF programmes linked to identifying and promoting cultural and natural attractions of the Atlantic seaboard such as artisanal fishing, local cuisine and maritime heritage	Quantitative	Interviews with managing authorities / Desk research in the databases of OP

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	Operational objectives	Type of effort				Sector (if any)	Output indicator	Quantitative/ qualitative	Source of information
		Investment	Re-search	Skills	Other				
38	4.2.D investing in protecting and restoring tourist attractions, including coastal and underwater cultural attractions and maritime heritage sites, with archaeological, ecological or historical value following as appropriate the principles of the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage	X				Tourism	Volume of EU funding from the ERDF and EMFF programmes for in protecting and restoring tourist attractions, including coastal and underwater cultural attractions and maritime heritage sites, with archaeological, ecological or historical value following as appropriate the principles of the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage	Quantitative	Interviews with managing authorities / Desk research in the databases of OP
							Number of sites and objects following the principles of the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage	Quantitative	Data from projects NAVIS I and NAVIS II

## 3.4 Options to overcome gaps in the monitoring framework

Impact and result indicators can rely on a vast range of data relevant to the objectives and priorities of the Atlantic Action Plan collected by national statistical institutes and harmonized on the European level by Eurostat. Eurostat also publishes statistical results of EU-wide surveys conducted by the European Commission. Finally, many European industrial associations collect and publish regularly statistics on their area of focus.

Operational objectives defined by the Atlantic Action Plan are very precise in terms of their scope and content. Data available to monitor them is in most cases very limited. This can be resolved either through conducting specific surveys or by analyzing the number of projects or the volume of financing of projects relating to a given objective.

### *Priority 1 - Promote entrepreneurship and innovation*

Indicators defined for Priority 1 give a good general picture of the Atlantic area's progress in terms of innovation, entrepreneurship and efficiency / sustainability of aquaculture and fisheries. Two impact indicators were defined – gross domestic product and enterprise birth rate. Both are available on a NUTS 2 level, giving thus an indication of the overall level of the performance of the regions' economy. However, Eurostat does not collect data specifically for the maritime sector for these indicators. Likewise, indicators on the Growth Expenditures for Research and Development, Employment in technology intensive sectors and the number of enterprises cooperating with R&D institutions will be available only for all sectors aggregated, but not separately for maritime sectors. As for the number of patents applications submitted in the Atlantic regions, the European Patent Office may be able to supply on demand more detailed statistics enabling to isolate maritime sectors.

Data from national statistics institutes may enable to overcome this obstacle provided that the data is harmonized for purpose of comparability. Specialized initiatives would have to be put in place in order to collect and retreat such data. The MARNET project financed by the INTERREG Atlantic Area is one such example, with the limitation that data is currently being collected only for the period 2008-2011.

For some of the operational objectives such as the mutual recognition of education and training programmes, awareness raising campaigns and the improvement of the EU labelling and certification of aquaculture and fishery products, specific surveys or interviews would have to be conducted with key stakeholders for the purpose of analyzing progress. Information can potentially be obtained interviews or through secondary research and synthesis of documents published by the following categories of stakeholders:

- ▶ National ministries / agencies in charge of clusters
- ▶ The national ENIC-NARIC agency and/or the ministry of education for mutual recognition or cross-border training programmes
- ▶ Members of the Task force on Maritime Employment and competitiveness
- ▶ Industry associations such as the European Fish Processors Association or similar national / regional associations within the Atlantic area for the questions related processing, labelling. Traceability and certification through interviews with, as well as discards and by-catch.

### *Priority 2 – Protect, secure and develop the potential of the Atlantic marine and coastal environment*

Priority 2 includes a broad range of topics. On the impact level, only one indicator was finally short listed: GHG emissions in the Atlantic area. Other indicators potentially available (such as for example discards) were excluded as data collection yields only incomplete or not robust enough outcomes.

#### **2.1 Improving maritime safety and security**

As for the safety related specific objectives, 6 indicators were identified - Number of vessels involved in accidents across the Atlantic Area; Number of non-indigenous species; Oil response vessels; Oil spills; Flood directive: compliance with the article 6 (risk maps) and later 7 (FRMP). The general limitation here

is geographic – data is collected and published usually on a broader level for the Atlantic ocean as a whole. A specific analysis will have to be conducted to decompose the data for the Atlantic area and the Atlantic regions.

As for the output indicators defined in this area, several limitations were encountered:

- ▶ The result indicator on harmful species only covers the presence of them and not the ability to respond to them. This obstacle can be overcome by conducting more detailed research projects on this question.
- ▶ No indicator is readily available for trafficking. However, specialized documentation from or interviews with representatives of institutions such as Europol could provide more information.
- ▶ “In-situ instruments” are very specific and need to be explored by identifying EU-financed projects (as an output indicator).
- ▶ “Better integration of data” can be monitored and evaluated by identifying new databases or extensions and improvement of existing databases. While no indicator is available in this area, secondary research among articles in the specialized press, annual reports of relevant national and regional authorities or interviews with their representatives will enable to overcome the lack of information.
- ▶ Sharing sea-basin related information within the CISE can be followed through interviews with regional / national stakeholders. Desk based research can also be conducted to identify practices of sharing experience among Member States.

## **2.2 Exploring and protecting marine waters and coastal zones**

Three results indicators have been identified for specific objective 2.2:

- ▶ Compliance with the MSDF – the most succinct way of evaluating this question is through a yes/no question. However, further and more detailed analyses would have to be conducted in order to assess the quality of marine waters (as defined by the directive) and progress made.
- ▶ Marine protected sites – data is available only per site, an aggregation will have to be done in order to obtain NUTS 2 regional data.
- ▶ Protection of marine and coastal environment – data will have to be collected from several documents and synthesized.

While indicators could be identified for some of the more general operational objectives, measuring progress is more complex for the more detailed issues:

- ▶ The ability to develop and maintain a mechanism or system for surveying and observing the waters is only partly covered by the compliance with MSDF.
- ▶ Platforms and instruments need to be assessed by investigating whether they have been set up and are active. Instruments are likely to be the outcome of project and need to be identified and analyzed.
- ▶ The seabed map needs to be captured by a separate analysis consisting of identifying the projects and programmes at national level and analyzing the coverage and the extent of sharing of data and information.
- ▶ The forecasting system needs to be assessed in a specific analysis and is not to be part of a general indicator.
- ▶ The exchange of best practice on emission reduction is not directed towards the Atlantic and can therefore not be captured by an indicator. A specific analysis is needed to investigate whether a platform was created and can be applied in an Atlantic context.

## **2.3 Sustainable management of marine resources**

Only one result indicator has been identified for specific objective 2.3. Only one result indicator was defined for this objective - mineral resources extraction. It only covers the resources being extracted at

the moment, more precisely traditional resources such as oil, gas, sand and gravel. The indicator doesn't cover bio resources, the extraction which is, however, limited at the moment.

For output indicators, further limitations are:

- ▶ The implementation of international laws dealing with the exploitation of resources is not covered by the output indicators. A more detailed legal analysis will have to be conducted to explore this.
- ▶ Assessing or mapping the seafloor will be done by research institutes. The best way is to identify projects financed by European funds. Similarly, sharing of assessments of the seafloor as well as the sharing of information on bio resources is best to be analyzed by analyzing projects financed which target this area.

## **2.4 Exploitation of the renewable energy potential of the Atlantic area's marine and coastal environment**

Indicators on marine renewable energy and offshore wind are readily available. Three indicators were identified in this area: Share of energy from renewable sources; Supply, transformation, consumption – renewables (hydro, wind, photovoltaic); Offshore wind energy production capacity. Data is only available on national level, in line with the fact that electricity grids are centralized in most countries. More specific data (production capacity and real output of different types of marine renewable energy facilities) may be available through national statistic institutes or reports from national / regional electricity providers or national associations for renewable energies and analyzed as output indicators.

The gap analysis showed two major gaps in the possibility to provide indicators with the priorities of the action plan. These two are:

- ▶ Shore side electricity will only be analyzed by specific initiatives – no measure/indicator has been identified to provide information on the matter

Off-shore renewable energy installations will be covered by the MW of renewable energy produced. Finally, during the definition of output indicators, following limitations were encountered:

- ▶ Assessing or mapping of the Atlantic resource potential and the possibilities to mitigate environmental or navigational impacts of marine energy production will be examined through specific studies. Progress can only be measured through the identification of projects targeting this area.
- ▶ The result of research and demonstration can to some extent be measured through additional capacity (demonstration units are often connected to the grid), although analysing projects related to research / demonstration in the area is necessary to get the whole picture of the progress.
- ▶ Objectives related to production ("encouraging harnessing of special geological, oceanographic and meteorological conditions" in outermost regions) can be measured directly through indicators on the production of energy in these regions.
- ▶ Progress in terms of contribution to the transmission system will also have to be analyzed through the number specific projects and the number of links among national grids.

### *Priority 3 - Improve accessibility and connectivity*

On the impact level, ports and connectivity are considered to cater to the general economic growth. Therefore, the same impact indicators as for Priority 1 apply. Ports are treated with separately through result indicators: Volume of short-sea shipping in the Atlantic area; Number of short sea routes; Completion status of TEN-T infrastructure priority projects; Number of cruise passengers; Maritime transport of freight by NUTS 2 regions. The first two of these indicators have by definition a broader geographical scope covering the Atlantic area as a whole, not relating to specific regions. The two latter ones apply well to the objectives of the Atlantic Action Plan. However, no indicator could be defined for the diversification of port activities beyond cruise passengers. This can either be solved by reviewing projects undertaken by ports in this field or through the analysis of reports by the European Ports Association or its national (regional) member ports.



The gap analysis showed two major gaps in the possibility to provide indicators on the output level for this specific objective. These two are:

- ▶ Shore side electricity will only be analyzed by specific initiatives – no measure/indicator has been identified to provide information on the matter
- ▶ Off-shore renewable energy installations will be covered by the MW of renewable energy produced (measured by results indicators number 17 and 19). This is a way of indirectly assuming that if energy is produced then, the framework conditions are sufficiently covered – no measure/indicator identified that can provide information on the matter otherwise a specific project can provide the detailed information

Also the analysis showed some issues that are only partly covered by the indicators suggested.

- ▶ Intermodality is only covered by the volume of maritime transport and number of routes. No indicators were identified indicators to cover links with other forms of transport.
- ▶ Administrative bottlenecks are measured by the volume of the short sea transport and analysis of time spend and potentials for improvement could improve the reflection of the administrative challenges

#### *Priority 4 - Create a socially inclusive and sustainable model of regional development*

Three indicators on the impact level were identified with respects to the social and sustainable regional development: Unemployment rate; Employment rate; Life expectancy at birth.

On the results level, no indicator could be defined for the specific objective 4.1. “Fostering better knowledge of social challenges in the Atlantic area”. It is best to follow progress on the output level, tracking exchange of best practices and social inclusion through the number of projects in the field, i.e. number of workshops and other knowledge sharing events or platforms (websites, newsletters and other).

For the objectives linked to the development of maritime and coastal tourism, “the increase in the number of visits to supported sites” is a well-suited output indicator, although doesn’t include a breakdown of marine sites and others. A detailed analysis of final reports of local marine tourism sites or in reports of regional tourism agencies or institutions as well as complementary interviews with them may complete the view with further insight. We also suggest a broader results indicator “Nights spent at tourist accommodation establishments in coastal regions”, which will enable to measure tourism in broader terms in the Atlantic area.

Finally, all four operational objectives in linked to tourism include the word “investment”, it is useful to analyse the volume of investment from either European funds (ERDF, EMFF) or funds of the European Investment Bank in these areas.



## 4 Detailed presentation of key impact and result indicators

The following section presents profiles of individual impact and results indicators. The profiles include information relative to the indicators themselves (type of indicator, unit, official definition and description of terms used, collection frequency) as well as their link to the Atlantic Action Plan and the intervention logic defined in Figure 3 in section 1 of the report.

The name of the source for the information is also indicated, including a direct link to this source. In the case of Eurostat data, the code of the respective Eurostat table is indicated. The corresponding table can easily be found on the [website of Eurostat](#) by searching this code in the “Browse / Search database” tool.

Finally, limitations regarding the indicators are described at the end of each indicator’s profile. In general, two types of limitations exist: thematic and geographic. Geographic limitations concern the availability of the data specifically for the Atlantic area and its coastal regions. Thematic limitations concern data’s coverage of maritime sectors. Suggestions for overcoming these limitations were also included for each of the indicators.

## 4.1 Key impact indicators

N°1 GDP in Atlantic regions			
Definition	<b>Type:</b> Impact indicator	<b>Unit:</b> € per inhabitant	<b>Geographic Level:</b> NUTS 2 and 3
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: A. Improved competitiveness of Atlantic blue economy/ Economic growth in Atlantic areas</li> <li>▶ It is linked with following results: (a), (b), (c), (d), (f), (i)</li> </ul>		
	<b>Link with the AAP objectives</b> <ul style="list-style-type: none"> <li>▶ <i>All priorities</i></li> </ul>		
	<b>Definition</b> The regional gross domestic product (GDP) is used to measure and compare the economic activity of regions.  Regional gross domestic product data are Eurostat estimates based on a harmonized methodology. Figures for gross value added at basic prices after correction for financial intermediation services indirectly measured (FISIM) are used as the basic variable for the estimates. Extra-regional data (i.e. value added created in other national regions than on national territory, e.g. in embassies, foreign army bases, offshore energy production, etc.) are proportionally allocated to the regions of a country. The conversion into € / inhabitant is done by Eurostat directly based on demographic statistics.  Data collection methodology is described in the publication " <i>Regional accounts methods - Gross value added and gross fixed capital formation by activity</i> ".		
Sources	<b>Sources</b> Eurostat	<b>Collection frequency</b> Annually	
	<b>Link:</b> nama_r_e2gdp		
	<b>Collection methodology</b> To be collected directly from the Eurostat online database		
Limitations	<b>Limitations and ways to overcome them</b>		
	This indicator covers all economic sectors. Whilst relevant for giving a general overview of the economic situation of Atlantic regions, it does not give any information on the specific contribution of maritime sectors in the economic growth of these regions.  Maritime sectors GDP in Atlantic regions: this information can be looked for and may be obtained through alternative sources and data collection. This indicator has been measured in 2012 within the framework of a specific EU-funded project ( <a href="#">MARNET</a> ) through ad-hoc data collection from national statistic institutions and harmonization work. At the time of writing this report, it is uncertain whether this indicator will be regularly monitored and updated in the future by the MARNET team.		



N°2 Enterprise birthrate			
	<b>Type</b> Impact indicator	<b>Unit:</b> Number of enterprises	<b>Geographic Level:</b> NUTS 0, NUTS 2 and NUTS 3 level
Definition	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: A. Improved competitiveness of Atlantic blue economy/ Economic growth in Atlantic areas</li> <li>▶ It is linked with following results: (a), (b), (c), (d), (f), (i)</li> </ul>		
	<b>Link with the AAP objectives</b> <ul style="list-style-type: none"> <li>▶ <i>All priorities</i></li> </ul>		
	<b>Definition</b> Business demography indicators are crucial for analyzing growth performance and potential of the economy of the Atlantic area.  <u>Enterprise Birth:</u> A birth amounts to the creation of a combination of production factors with the restriction that no other enterprises are involved in the event. Births do not include entries into the population due to mergers, break-ups, split-off or restructuring of a set of enterprises. It does not include entries into a sub-population resulting only from a change of activity. A birth occurs when an enterprise starts from scratch and actually starts activity. An enterprise creation can be considered a birth, if new production factors, in particular new jobs, are created. If a dormant unit is reactivated within two years, this event is not considered a birth.  <u>Enterprise Death:</u> A death amounts to the dissolution of a combination of production factors with the restriction that no other enterprises are involved in the event. Deaths do not include exits from the population due to mergers, take-overs, break-ups or restructuring of a set of enterprises. It does not include exits from a sub-population resulting only from a change of activity. An enterprise is included in the count of deaths only if it is not reactivated within two years. Equally, a reactivation within two years is not counted as a birth.  <u>Survival:</u> In the Business Demography context, survival occurs if an enterprise is active in terms of employment and/or turnover in the year of birth and the following year(s). Two types of survival can be distinguished: <ol style="list-style-type: none"> <li>1. An enterprise born in year xx is considered to have survived in year xx+1 if it is active in terms of turnover and/or employment in any part of year xx+1 (= survival without changes).</li> <li>2. An enterprise is also considered to have survived if the linked legal unit(s) have ceased to be active, but their activity has been taken over by a new legal unit set up specifically to take over the factors of production of that enterprise (= survival by take-over).</li> </ol> <u>Enterprise:</u> The enterprise is the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations. An enterprise may be a sole legal unit.  Derived indicators such as Business Churn (Enterprise Birth – Enterprise Death) can be calculated simply from the data extracted from Eurostat.		
Sources	<b>Sources</b> Eurostat		<b>Collection frequency</b> Annually

	<b>Link / Eurostat table code</b> bd_9ac_l_form_r2; bd_hgnace2_r3; bd_hgnace2_r3
	<b>Collection methodology</b> To be collected directly from the Eurostat online database
Limitations	<b>Limitations and ways to overcome them</b> Data comes from Eurostat’s Structural Business Survey. This survey covers only data from the business economy in the industrial and services sectors, but excludes the primary sector (agriculture, fishery, forestry) and non-market services (health, education, public administration). Sector specific data is available for industrial sections – level 1 of the NACE rev 2. nomenclature. In geographical terms, data is available at national level for all of the Atlantic Member States and, in the case of France, Spain and Portugal on the NUTS 2 and NUTS 3 levels. Potential strategies to target maritime sectors and obtain regional data would include collecting data directly from National Statistical Institutes and harmonizing them.

N°3 Greenhouse gas (GHG) emissions			
Definition	<b>Type:</b> Impact indicator	<b>Unit:</b> CO <sub>2</sub> equivalents	<b>Geographic level:</b> National data converted into regional (NUTS 2) by use of number of inhabitants
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: B.Reduced impact on climate change</li> <li>▶ It is linked with following results: (d), (e), (g), (h)</li> </ul>		
	<b>Link with the AAP’s objectives</b> <ul style="list-style-type: none"> <li>▶ Priority 2: Protect, secure and develop the potential of the Atlantic marine and coastal environment</li> </ul>		
	<b>Definition</b> The indicator compares the level of CO2 emissions per inhabitant in the EU, in tonnes per inhabitant. For EU Member States: this indicator is compiled using the data on CO2 emissions (sector 1-7 excluding sector 5 - land use change and forestry) provided in the official submission of the European Commission to the UNFCCC; and per capita emissions are calculated using Eurostat population statistics.		
Sources	<b>Source</b> Eurostat and European Environment Agency (EEA)		<b>Collection frequency</b> Annual
	<b>Link / Eurostat table code</b> tsdgp410; tgs00001		
	<b>Collection methodology:</b> To be collected directly from the Eurostat online database		
Limitations	<b>Limitations and ways to overcome them</b> The indicator compares the level of CO2 emissions per inhabitant in the EU with number of inhabitants per member state. To obtain basic information on the CO2 emissions in the Atlantic regions, national averages (tonnes per inhabitant) are calculated to Atlantic totals (tonnes per region). Applying national averages does not allow for evaluating policies and initiatives in the Atlantic area. However, a single objective in the Atlantic Action Plan is to assess the carbon footprint of the Atlantic blue economy. Using the general data makes it possible to indicate developments from year to year on a consistent basis		

N°4 Unemployment rate			
Definition	<b>Type:</b> Impact indicator	<b>Unit:</b> % of active workforce	<b>Geographic level:</b> NUTS 2
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: C. Better health, social inclusion, wellbeing of coastal population</li> <li>▶ It is linked with following results: (d), (e), (g), (h)</li> </ul>		
	<b>Link with the AAP's priorities</b> <ul style="list-style-type: none"> <li>▶ Priority 4. Create a socially inclusive and sustainable model of regional development</li> </ul>		
	<b>Definition</b> <p>Data on unemployment gives an overview of the social inclusion of the population of the Atlantic area into its economy. Data is available for comparing the unemployment rates by sex.</p> <p>The unemployment rate shows unemployed persons as a percentage of the economically active population. The source for the regional labour market information down to NUTS level 2 is the EU Labour Force Survey (EU LFS). This is a quarterly household sample survey conducted in all 27 Member States of the EU and in EFTA and Candidate countries.</p> <p>Unemployed persons comprise persons aged 15-74 who were (all three conditions must be fulfilled simultaneously): 1. without work during the reference week; 2. currently available for work; 3. actively seeking work or who had found a job to start within a period of at most three months. On the contrary, employed persons are those aged 15-64, who during the reference week did any work for pay, profit or family gain for at least one hour, or were not at work but had a job or business from which they were temporarily absent.</p>		
Sources	<b>Sources</b> Eurostat	<b>Collection frequency</b> Quarterly	
	<b>Link / Eurostat table</b> tgs00010		
	<b>Collection methodology</b> To be collected directly from the Eurostat online database		
Limitations	<b>Limitations and ways to overcome them</b> N/A		

N°5 Employment rate			
Definition	<b>Type:</b> Impact indicator	<b>Unit:</b> % of population	<b>Geographic level:</b> NUTS 2
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: C. Better health, social inclusion, wellbeing of coastal population</li> <li>▶ It is linked with following results: (d), (e), (g), (h)</li> </ul>		
	<b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ Priority 4. Create a socially inclusive and sustainable model of regional development</li> </ul>		
	<b>Definition:</b> Regional (NUTS level 2) employment rate of the age group 15-64 represents employed persons aged 15-64 as a percentage of the population of the same age group.  The indicator is based on the EU Labour Force Survey. The survey covers the entire population living in private households and excludes those in collective households such as boarding houses, halls of residence and hospitals. The employed persons are those aged 15-64, who during the reference week did any work for pay, profit or family gain for at least one hour, or were not at work but had a job or business from which they were temporarily absent.		
Sources	<b>Sources</b> Eurostat	<b>Collection frequency</b> Monthly	
	<b>Link / Eurostat table code</b> tgs00007		
	<b>Collection methodology:</b> To be collected directly from the Eurostat online database		
Limitations	<b>Limitations and ways to overcome them</b> Complementary analysis can include age categories 20-64 (Eurostat table tgs00102) and especially 55-64 (Eurostat table tgs00054) enabling to examine the employment of seniors.  Complementary initiatives can bring additional relevant information on the employment on maritime sectors – through collecting and harmonizing data from National Statistics institutes or through dedicated initiatives such as the MARNET project.		



N°6 Life expectancy at birth			
	<b>Type:</b> Impact	<b>Unit:</b> Number of years	<b>Geographic Level:</b> NUTS 2
Definition	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: C. Better health, social inclusion, wellbeing of coastal population</li> <li>▶ It is linked with following results: (d), (e), (g), (h)</li> </ul>		
	<b>Link with the AAP’s priorities</b> <ul style="list-style-type: none"> <li>▶ Priority 4: Create a socially inclusive and sustainable model of regional development</li> </ul>		
	<b>Definition:</b> This indicator gives information on health and wellbeing in Atlantic regions. It is suggested to use the “at birth values” to give a maximum overview of the living conditions of the local population in Atlantic regions.  <u>Life expectancy at given exact age:</u> the mean number of years still to be lived by a person who has reached a certain exact age, if subjected throughout the rest of his or her life to the current mortality conditions (age-specific probabilities of dying). Life table is one of the most important and most widely used devices in demography, summarizing various aspects of the variation of mortality with age and showing, for each age, the probability that a person of that age will die before his next birthday. Functions pertaining to mortality are available in distinct tables: age specific death rates, probabilities of dying between exact ages, probability of surviving between exact ages, number left alive at a given exact age, number dying between exact ages, person-years lived between exact ages, total person-years lived above given exact age and life expectancy at given exact age. Eurostat uses the concept of age completed for the calculation of the mortality indicators by age.  <u>Age completed (or age last birthday):</u> represents the number of completed years lived by a person, so no decimals are taken into account. It is expressed as the number of birthday anniversaries passed on the date of reference.		
Sources	<b>Sources</b>		<b>Collection frequency</b>
	Eurostat		Annually.
	<b>Link / Eurostat table</b> demo_r_mlifexp		
	<b>Collection methodology</b> To be collected directly from the Eurostat online database		
Limitations	<b>Limitations and ways to overcome them</b> The completeness of the time series depends on the availability of data sent by the national statistical institutes.		

## 4.2 Result indicators

N°7 Number of enterprises cooperating with research institutions		
<b>Type:</b> Result indicator	<b>Unit:</b> Number of enterprises	<b>Geographic Level:</b> NUTS 2
Definition	<p><b>Link with the AAP intervention logic</b></p> <ul style="list-style-type: none"> <li>▶ This indicator allowing measuring following expected results:</li> <li>▶ It is linked with the impact A. More competitive economy thanks to the “blue economy”.</li> </ul> <p><b>Link with the AAP’s specific objectives</b></p> <ul style="list-style-type: none"> <li>▶ 1.1 Sharing knowledge between higher education organisations, companies and research centres</li> <li>▶ 1.2 Enhancement of competitiveness and innovation capacities in the maritime economy of the Atlantic area</li> </ul>	
	<p><b>Definition</b></p> <p>This indicator is defined by the ERDF Monitoring and Evaluation arrangements as an common indicator, ie. legally required. In geographical terms, it will only be collected for companies receiving the support from ERDF / ESF funding, which will allow to estimate directly the effects of these funds on the enterprises in the given geographical area.</p> <p>This indicator shows the level of cooperation between public and private higher education, research &amp; development institutions and businesses.</p> <p><u>Number of enterprises that cooperate with research institutions in R&amp;D projects:</u> At least one enterprise and one research institution participates in the project. One or more of the cooperating parties (research institution or enterprise) may receive the support but it must be conditional to the cooperation. The cooperation may be new or existing. The cooperation should last at least for the duration of the project.</p> <p><u>Enterprise:</u> Organization producing products or services to satisfy market needs in order to reach profit. The origin of the enterprise (inside or outside of the EU) does not matter. In case one enterprise takes the formal lead and others are subcontractors but still interacting with the research institution, all enterprises should be counted. Enterprises cooperating in different projects should be added up (provided that all projects receive support); this is not regarded as multiple counting.</p> <p><u>Research institution:</u> an organization of which R&amp;D is a primary activity.</p> <p>Cooperation can be counted based on either the operations or the participants. This indicator focuses on the enterprises as participants.</p>	
	Sources	
	Sources	<p style="text-align: center;"><b>Sources</b></p> <p><i>EU Regulation for the ERDF (published on the 20/12/13) - list of common indicators;</i></p>
<p><b>Link:</b> -</p>		
<p><b>Collection methodology:</b> Data to be collected from DG REGIO monitoring system.</p>		

**Limitations and ways to overcome them**

As a possible replacement for data in case of its unavailability from the DG REGIO database is through the Community Innovation Survey (CIS), more precisely table “Types of co-operation partner for product and process innovation” (code: inn\_cis7\_coop) with indicators:

- ▶ Enterprises co-operating with universities or other higher education institutions
- ▶ Enterprises co-operating with consultants, commercial labs, or private R&D institutes

The CIS is conducted every two years by National Statistics Institutes under the auspices of Eurostat, which is in charge of harmonizing and publishing the data.

However, no indication is available on a regional basis. Specific surveys or initiatives would have to be conducted in order to map information on the regional level.

<b>N°8 Number of research institutions participating in cross-border, transnational or interregional research projects</b>			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Number of organizations	<b>Geographic Level:</b> NUTS 2
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allowing measuring following expected results: (a), (i), (j)</li> <li>▶ It is linked with the impact A. More competitive economy thanks to the “blue economy”</li> </ul>		
	<b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 1.1 Sharing knowledge between higher education organisations, companies and research centres</li> <li>▶ 1.2 Enhancement of competitiveness and innovation capacities in the maritime economy of the Atlantic area</li> </ul>		
	<b>Definition</b> <p>This indicator is defined by the ERDF Monitoring and Evaluation arrangements as an common indicator, ie. legally required. In geographical terms, it will only be collected for companies receiving the support from ERDF / ESF funding, which will allow to estimate directly the effects of these funds on the enterprises in the given geographical area.</p> <p>‘Number of research institutions participating in cross-border, transnational or interregional research projects’ is a variant of the indicator ‘Number of enterprises cooperating with research institutions’ with the difference that it counts cooperating research institutions instead of enterprises.</p> <p>If a participating organisation has departments operating in different places, the location of the participating department(s) should be taken into account to qualify as crossborder project. If a participating enterprise has departments operating in different places, the location of the participating department(s) should be taken into account to qualify as crossborder project.</p>		
Sources	<b>Sources</b>	<b>Collection frequency</b>	
	<i>EU Regulation for the ERDF (published on the 20/12/13) - list of common indicators</i>	<i>N+3, N+6</i>	
<b>Link:</b> -			
<b>Collection methodology:</b> Data to be collected from DG REGIO monitoring system			
Limitations	<b>Limitations and ways to overcome them</b>		
	<p>Collecting data for this indicator will require access to the DG Regio monitoring system. Also, while this indicator is defined among the core indicators of the ERDF programme, some regions may chose not to collect it.</p> <p>As a possible replacement for data in case of unavailability from the DG REGIO database is through the Community Innovation Survey (CIS), more precisely table “Types of co-operation partner for product and process innovation” (code: inn_cis7_coop) with the indicator "Enterprises engaged in any type of innovation co-operation with a partner in EU countries, EFTA or EU candidates countries (except a national partner)".</p> <p>The CIS is conducted every two years by National Statistics Institutes under the auspices of Eurostat, which is in charge of harmonizing and publishing the data.</p> <p>However, no indication is available on a regional basis. Specific surveys or initiatives would have to be conducted in order to map information on the regional level.</p>		

N°9 Total intramural R&D expenditure (GERD)			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> € / inhabitant	<b>Geographic Level:</b> NUTS 2
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allowing measuring following expected results: (a), (i), (j)</li> <li>▶ It is linked with the impact ‘More competitive economy thanks to the “blue economy”’.</li> </ul> <b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 1.1 Sharing knowledge between higher education organisations, companies and research centres</li> <li>▶ 1.2 Enhancement of competitiveness and innovation capacities in the maritime economy of the Atlantic area</li> </ul>		
	<b>Definition:</b> Intramural expenditures are all expenditures for research and development (R&D) performed within a statistical unit or sector of the economy during a specific period, whatever the source of funds. Both current and capital expenditures are included. (definition given by the OECD)		
Sources	<b>Sources</b>	<b>Collection frequency</b>	
	<i>Eurostat</i>	<i>Annual</i>	
<b>Link:</b> <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd_e_gerdreg&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd_e_gerdreg&amp;lang=en</a>			
<b>Collection methodology:</b> To be collected directly from the Eurostat online database			
Limitations	<b>Limitations and ways to overcome them</b> This indicator measures global expenditures for R&D but does not specifically measure expenditures in the maritime sector. This would have to be measured through a specific survey among companies.		

N°10 Patent applications to the EPO by priority year			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Number of applications per million of inhabitants	<b>Geographic Level:</b> NUTS 2
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allowing measuring following expected results: (a), (i), (j)</li> <li>▶ It is linked with the impact A. More competitive economy thanks to the “blue economy”.</li> </ul>		
	<b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 1.1 Sharing knowledge between higher education organisations, companies and research centres</li> <li>▶ 1.2 Enhancement of competitiveness and innovation capacities in the maritime economy of the Atlantic area</li> </ul>		
<b>Definition:</b> The number of patent applications to the European Patent Office (EPO), giving thus an indication of a countries’ and regions’ inventive activity, ie. their ability to exploit knowledge and translate it into potential economic gains.			
Sources			
Sources	<b>Sources</b> <i>Eurostat</i>	<b>Collection frequency</b> <i>Annual</i>	
	<b>Link / Eurostat table</b> tgs00040		
	<b>Collection methodology:</b> database To be collected directly from the Eurostat online database		
Limitations	<b>Limitations and ways to overcome them</b> Data is available on the regional basis (NUTS 2), but not directly broken down by sector. However, this may be obtained upon request from the European Patent Office, which publishes regularly sector statistics on an EU level.		

N°11 Employment in technology and knowledge-intensive sectors			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Number of employees (thousands)	<b>Geographic Level:</b> NUTS 2
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allowing measuring following expected results: (a), (i), (j)</li> <li>▶ It is linked with the impact ‘A. More competitive economy thanks to the “blue economy”’.</li> </ul>		
	<b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 1.1 Sharing knowledge between higher education organisations, companies and research centres</li> <li>▶ 1.2 Enhancement of competitiveness and innovation capacities in the maritime economy of the Atlantic area</li> </ul>		
	<b>Definition:</b> Data come from EU Labour force survey (LFS). Employed people are defined as persons aged 15 year and over who during the reference week performed work, even for just one hour a week, for pay, profit or family gain or were not at work but had a job or business from which they were temporarily absent because of, e.g., illness, holidays, industrial dispute and education and training. In high-tech statistics the population excludes anyone below the age of 15 or over the age of 74.  The definition of technology and knowledge intensive sectors is detailed in a Eurostat document available under the following link: <a href="http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/htec_esms_an3.pdf">http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/htec_esms_an3.pdf</a>		
Sources	<b>Sources</b>  <i>Eurostat</i>	<b>Collection frequency</b>  <i>Annual</i>	
	<b>Link:</b> <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=htec_emp_reg&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=htec_emp_reg&amp;lang=en</a>		
	<b>Collection methodology:</b> To be collected directly from the Eurostat online database		
Limitations	<b>Limitations and ways to overcome them</b> Data is available on the regional basis (NUTS 2), but not directly broken down by sector. However, this may be obtained upon request from National Statistics Institutes.		

N°12 Volume of short-sea shipping in the Atlantic area			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Thousands of tonnes	<b>Geographic level:</b> National
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: A. More competitive economy thanks to “blue economy”</li> <li>▶ It is linked with following results: (c), (g)</li> </ul> <b>Link with the AAP’s specific objectives:</b> <ul style="list-style-type: none"> <li>▶ 3.1: promoting cooperation between ports</li> </ul>		
	<b>Definition</b> <p>The short sea transport sector – intra-European shipping – is responsible for some 40 per cent of all transport within the EU. Short sea shipping connects Atlantic ports with other European ports (or ports situated in non-European countries having a coastline on the enclosed seas bordering Europe) and road and rail networks across the seas. Thus, short sea shipping is central to intermodal transport and diversion of cargo from roads to sea (cf. operational objective 3.1.A)</p> <p>The indicator measures volume of short sea shipping in gross weight of goods being transported by sea from main ports in the Atlantic Member States to other main EU-27 ports.</p>		
Sources	<b>Sources</b>	<b>Collection frequency</b>	
	<i>Eurostat</i>	<i>Annual</i>	
	<b>Link / Eurostat table code</b> mar_sg_am_cws		
<b>Collection methodology:</b> To be collected directly from the Eurostat online database			
Limitations	<b>Limitations and ways to overcome them:</b> <p>Information covers only main ports (ports handling more than 1 million tonnes of goods annually). Data is only available at national level and therefore not only the Atlantic area. Statistical agencies can potentially provide information on single Atlantic ports or a subset of individual ports can be contacted for this information.</p> <p>In the data source, it is possible to select North East Atlantic Ocean in a Sea Bassin drop down. This selection does to some extent reflect but is not limited to the geographical scope of the Atlantic Action Plan. As for now it is preferable to use the national data on Member State level in spite of the fact that Mediterranean and North Sea activity affects results (note that the selection shows the geography of partner port. Thus, volume of short sea shipping originating from European ports with destination in the North East Atlantic Ocean).</p> <p>In addition, the indicator does not provide information on short-sea shipping from Atlantic ports to ports situated in non-European countries having a coastline on the enclosed seas bordering Europe.</p>		



N°13 Number of short-sea routes			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Number	<b>Geographic level:</b> Specific ports in the Atlantic area
	<b>Link with that AAP intervention logic</b>		
	<ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: A. More competitive economy thanks to “blue economy”</li> <li>▶ It is linked with following results: (c), (g)</li> </ul>		
	<b>Link with the AAP’s specific objectives:</b> <ul style="list-style-type: none"> <li>▶ Priority 3: Improve accessibility and connectivity</li> <li>▶ Specific objective 3.1 promoting cooperation between ports</li> </ul>		
<b>Definition</b>			
<p>The short sea transport sector – intra-European shipping – is responsible for some 40 per cent of all transport within the EU. Short sea shipping connects Atlantic ports with other European ports (or ports situated in non-European countries having a coastline on the enclosed seas bordering Europe) and road and rail networks across the seas. Thus, short sea shipping is central to intermodal transport and diversion of cargo from roads to sea (cf. operational objective 3.1.A).</p> <p>Under the Motorways of the Sea (MoS) initiative, in the TEN-T revised guidelines defined as the maritime dimension of the trans-European transport network, such route is formalized as a maritime link between maritime ports of the comprehensive network or between a port of the comprehensive network and a third-country port where such links are of strategic importance to the Union. The funding instrument for MoS will be the Connecting Europe Facility (CEF; Innovation &amp; Networks Executive Agency). Given that projects within the objectives of MoS are also funded through the European Neighborhood and Partnership Instrument for promoting maritime connectivity to the neighborhood countries, the latter instrument could form an additional basis for evaluating the development of EU shipping to the coast of Africa</p>			
Sources	<b>Sources</b>	<b>Collection frequency</b>	
	Innovation & Networks Executive Agency	n/a	
	<b>Link / Eurostat table</b>		
	<a href="http://ec.europa.eu/transport/marcopolo/in-action/motorways-of-the-sea/index_en.htm">http://ec.europa.eu/transport/marcopolo/in-action/motorways-of-the-sea/index_en.htm</a> <a href="http://www.mos-helpdesk.eu/">http://www.mos-helpdesk.eu/</a> <a href="http://inea.ec.europa.eu/">http://inea.ec.europa.eu/</a>		
Limitations	<b>Collection methodology</b>		
	Accessing number of short sea shipping routes based on grants given under Motorways of the Sea initiative		
<b>Limitations and ways to overcome them</b>			
Motorways of the sea and other EU initiatives do not capture all routes. For more accurate coverage, major ports in the Atlantic region could be contacted directly.			

N°14 Completion status of TEN-T infrastructure priority projects			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Percentage	<b>Geographic level:</b> European transport corridors linking ports and regions of the Atlantic area.
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: A. More competitive economy thanks to “blue economy”</li> <li>▶ It is linked with following results: (c), (f), (h), (i), (j)</li> </ul>		
	<b>Link with the AAP’s specific objectives:</b> <ul style="list-style-type: none"> <li>▶ 3.1 promoting cooperation between ports</li> </ul>		
	<b>Definition</b> <p>The TEN-T aims amongst others to develop the infrastructure network of Europe. In the 2014-2020 period this includes connecting 85 core network ports with hinterland (rail and road links) along nine core network corridors.</p> <p>TEN-T infrastructure priority projects refer to transport network development that increases connectivity within the Atlantic area and towards hinterland Europe through core network corridors.</p> <p>Completion status refers to the current status of relevant TEN-T priority projects. 100% denotes to fully completed projects and sections of projects and 0% refers to the situations where works have not been commenced.</p>		
Sources	<b>Sources</b> <p><i>TEN-T: Progress report – Implementation of the TEN-T Priority Projects</i></p> <p><i>(Innovation &amp; Networks Executive Agency)/Connecting Europe Facility - Transport</i></p>		<b>Collection frequency</b> <p><i>Biannual</i></p>
	<b>Link</b> <p><a href="http://ec.europa.eu/transport/themes/infrastructure/ten-t-implementation/priority-projects/european-coordinators/doc/pp_report_low_final.pdf">http://ec.europa.eu/transport/themes/infrastructure/ten-t-implementation/priority-projects/european-coordinators/doc/pp_report_low_final.pdf</a></p> <p><a href="http://ec.europa.eu/transport/themes/infrastructure/connecting_en.htm">http://ec.europa.eu/transport/themes/infrastructure/connecting_en.htm</a></p>		
	<b>Collection methodology:</b> <p>Completion status of priority projects that receive funding are monitored by the Innovation &amp; Networks Executive Agency</p>		
Limitations	<b>Limitations and ways to overcome them</b> <p><i>TEN-T priority projects tend to target transport corridors where only parts are in the Atlantic area. Thus, the completion status can be high in the Atlantic region facilitating internal connectivity, but the rest of the corridor can be incomplete, hampering the connectivity to the rest of Europe. Likewise, TEN-T project are only to a limited extent related to marine infrastructure. However, connectivity of ports and Atlantic regions are heavily dependent on hinterland infrastructure, which is also expressed in the Atlantic Action Plan (cf. operational objective 3.1.A)</i></p>		

N°15 Number of cruise passengers			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Number	<b>Geographic level:</b> Atlantic area (Eurostat) / Atlantic being part of Northern Europe /National (European Cruise Council)
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: A. More competitive economy thanks to “blue economy” and C. Better health, social inclusion and wellbeing of coastal populations.</li> <li>▶ It is linked with following results: (c), (j)</li> </ul>		
	<b>Link with the AAP’s specific objectives:</b> <ul style="list-style-type: none"> <li>▶ 3.1 promoting cooperation between ports</li> <li>▶ 4.2 Preserving and promoting and the Atlantic’s cultural heritage</li> </ul>		
	<b>Definition:</b> <p>The indicator measures the number of passengers each year travelling on cruise ships in the Atlantic region.</p> <p>The number of tourists is used to express the ability for the port in the region to attract the cruise industry. It is therefore indirectly assumed that this is directly related to the ability to diversify into new business activities.</p> <p>There is information available of the origin of these passengers and the data allow for distinguishing between embarking and port of call. Further the statistics includes data on employment in the sector and expenditures. There is also included information about the major ports. For the Atlantic information for Lisbon, Cadiz, Le Havre and Vigo is included</p>		
Sources	<b>Sources</b>	<b>Collection frequency</b>	
	CLIA Europe (2013): The Cruise Industry – Contribution of Cruise Tourism to the Economies of Europe 2013 Edition.	<i>Annually / biannually</i>	
	<b>Link:</b> <a href="http://www.europecruisecouncil.com/content/ECC%20Report%202011%202012.pdf">http://www.europecruisecouncil.com/content/ECC%20Report%202011%202012.pdf</a> <a href="http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?title=File:Cruise_passengers_in_the_EU_by_basin_2010_(1)_(%25_share_of_total).png&amp;filetimestamp=20120518161346">http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?title=File:Cruise_passengers_in_the_EU_by_basin_2010_(1)_(%25_share_of_total).png&amp;filetimestamp=20120518161346</a> Report available at <a href="http://www.cruise-norway.no/viewfile.aspx?id=3824">http://www.cruise-norway.no/viewfile.aspx?id=3824</a>		
<b>Collection methodology:</b>			
The information is gathered through questionnaires to the operators.			

**Limitations and ways to overcome them:**

The challenge is to establish a precise estimation of the number of cruise passenger in the Atlantic area because the data are merely from major ports. Further, tourism is not limited to cruise activity but also passenger ships and leisure boats. There is not a readily available way to cope with this data challenge, but potentially a composite indicator of ports' diversification can be developed of which cruise ship activity is one component.

Eurostat reports detailed information on passenger transport in individual ports of the Atlantic Members States. However, this data is not available only on the NUTS 1 level, although with the possibility to isolate data for coastal areas for France and Spain.

An additional source of information is the European Cruise Council (ECC) e.g. 2011/2012 Report, Making a real social and economic contribution to Europe's economy:

<http://www.europeancruisecouncil.com/content/ECC%20Report%202011%202012.pdf>

N°16 Maritime transport of freight			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> 1000 tonnes	<b>Geographic level:</b> NUTS 2
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: A. More competitive economy thanks to “blue economy”</li> <li>▶ It is linked with following results: (c), (g)</li> </ul>		
	<b>Link with the AAP’s specific objective objectives:</b> <ul style="list-style-type: none"> <li>▶ 3.1 promoting cooperation between ports</li> </ul>		
	<b>Definition:</b> Freight in the Atlantic ports of Europe measured by gross weight based on regional data. The information covers national, European and intercontinental transport and is therefore an expression of both economic activities in ports and hinterland, but also the development of the maritime transport sector in the Atlantic area as such.		
Sources	<b>Sources</b>	<b>Collection frequency</b>	
	<i>Eurostat</i>	<i>Annual</i>	
	<b>Link:</b> t_tran_r; tgs00076		
<b>Collection methodology:</b> To be collected directly from the Eurostat online database			
Limitations	<b>Limitations and ways to overcome them:</b> <i>None</i>		

N°17 Share of energy from renewable sources			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Share (%) of renewable energy in gross final energy consumption	<b>Geographic level:</b> National
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allowing measuring following expected results: (c), (d), (g)</li> <li>▶ It is linked with the impact ‘Reduced impact of climate change / Reduced carbon footprint in the Atlantic regions’</li> </ul>		
	<b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 2.4 exploitation of the renewable energy potential of the Atlantic area’s marine and coastal environment</li> </ul>		
	<b>Definition:</b> Share of renewable energy in gross final energy consumption takes into account only electricity generated from renewable resources. Renewable energy includes: hydro-power, geothermal energy, solar energy, tide/wave/ocean energy, wind energy.		
Sources	<b>Sources</b> <i>Eurostat</i>	<b>Collection frequency</b> <i>Annual</i>	
	<b>Link / Eurostat table</b> nrg_ind_335		
	<b>Collection methodology:</b> To be collected directly from the Eurostat online database		
Limitations	<b>Limitations and ways to overcome them</b> No breakdown per region is available (only NUTS 0 level). However, this may be obtained upon request from National Statistics Institutes or from regional (national) providers of energy in the Atlantic regions.		

N°18 Off-shore wind energy production capacity			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> MW	<b>Geographic level:</b> National
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allowing measuring following expected results: (c), (d), (g)</li> <li>▶ It is linked with the impact ‘Reduced impact of climate change / Reduced carbon footprint in the Atlantic regions’</li> </ul>		
	<b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 2.4 exploitation of the renewable energy potential of the Atlantic area’s marine and coastal environment</li> </ul>		
	<b>Definition</b> This indicator shows the capacity of electricity from off-shore wind energy facilities. Statistics also include the capacity of testing facilities and give a picture of off-shore wind energy all throughout Europe, enabling to assess the contribution of the Atlantic area as well as a comparison of the share of offshore wind energy generation in the overall output, compare to onshore production.		
Sources	<b>Sources</b> <i>European Wind Energy Association                      “Wind in power, 2012 European statistics” report</i>	<b>Collection frequency</b> <i>Annual</i>	
	<b>Link</b> <a href="http://www.ewea.org/statistics/european/">http://www.ewea.org/statistics/european/</a>		
	<b>Collection methodology:</b> Data needs to be extracted from the annual reports.		
Limitations	<b>Limitations and ways to overcome them</b> Data must be extracted from annual reports, where it is available on a country. Upon request, the EWEA should be able to provide regional statistics.		

N°19 Supply, transformation, consumption - renewables (hydro, wind, photovoltaic)			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Gigawatt hour	<b>Geographic level:</b> National
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allowing measuring following expected results: (c), (d), (g)</li> <li>▶ It is linked with the impact ‘Reduced impact of climate change / Reduced carbon footprint in the Atlantic regions’</li> </ul> <b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 2.4 exploitation of the renewable energy potential of the Atlantic area’s marine and coastal environment</li> </ul>		
	<b>Definition:</b> Annual data on renewables (hydro, wind, photovoltaic) covering the full spectrum of the energy balances positions from supply through transformation to final energy consumption by sector and fuel type.		
Sources	<b>Sources</b> <i>Eurostat</i>	<b>Collection frequency</b> <i>Annual</i>	
	<b>Link / Eurostat table</b> nrg_107a		
	<b>Collection methodology:</b> Collection directly from online database.		
Limitations	<b>Limitations and ways to overcome them</b> No breakdown per region is available (only NUTS 0 level). However, this may be obtained upon request from National Statistics Institutes or from regional (national) providers of energy in the Atlantic regions.		



N°20 Non-renewable resource extraction			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Tonnes of oil equivalent (toeq)	<b>Geographic level:</b> NUTS 0 (Member States)
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: A. More competitive economy thanks to “blue economy” and B. Reduced impact of climate change/Reduced carbon footprint in the Atlantic Region</li> <li>▶ It is linked with following results: (e)</li> </ul>		
	<b>Link with the AAP’s specific objective objectives:</b> <ul style="list-style-type: none"> <li>▶ 2.3 sustainable management of marine resources</li> </ul>		
	<b>Definition:</b> The indicator measures the amount of offshore non-renewable resource extracted which at the present stage only involves oil and gas extraction.		
Sources	<b>Sources</b>		<b>Collection frequency</b>
	<i>Joint Ressource Council (JRC)</i>		<i>Annually</i>
	<b>Link:</b> <a href="http://euoag.jrc.ec.europa.eu/node/63">http://euoag.jrc.ec.europa.eu/node/63</a>		
<b>Collection methodology:</b> A set of diverse national data sources are used to collect information.			
Limitations	<b>Limitations and ways to overcome them:</b>		
	Deep sea minerals are not covered by the existing statistics on offshore extraction of non-renewable resources. This is due to the fact that the activity at the moment does not include deep-sea minerals – the exemption being sand and gravel which takes place on many locations along the Atlantic coast. Statistics both national and European will most likely follow an acceleration of offshore mining, thus being available for future evaluation of activity. Sand and gravel extraction data be collected from existing sources if need be (e.g. the OSPAR Quality Status Report contains information of this kind).  The use of biometric resources for biotech and pharmaceutical purposes is comparatively not covered by the existing statistics. These resources have further more the challenge that physical amounts can be very small and not related to the related economic importance and also that the use of the resource is likely to occur in a different region then the sample is extracted (thus geographically distant from the Atlantic area).		

N°21 Biotechnology patent applications to the EPO			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Number of patents	<b>Geographic Level:</b> NUTS 3
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected results: (a), (b), (e), (i)</li> <li>▶ It is linked with the impact ‘More competitive economy thanks to the “Blue economy”’</li> </ul> <b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 1.1 Sharing knowledge between higher education organisations, companies and research centres</li> <li>▶ 1.2 Enhancement of competitiveness and innovation capacities in the maritime economy of the Atlantic areas</li> <li>▶ 2.2. exploring and protecting marine waters and coastal zones</li> </ul>		
	<b>Definition</b> Number of biotechnology patent applications in a year at the regional level.  The European Patent office (EPO) data refer to all patent applications by priority year as opposed to patents granted by priority year, which is the case of USPTO data. Patents reflect a country’s inventive activity. Patents also show the country’s capacity to exploit knowledge and translate it into potential economic gains.  The national distribution of patent applications is assigned according to the inventor’s country of residence. If one application has more than one inventor, the application is divided equally among all of them and subsequently among their countries of residence, thus avoiding double counting.		
Sources	<b>Sources</b>  <i>Eurostat</i>	<b>Collection frequency</b>  <i>Annually</i>	
	<b>Link / Eurostat table</b>  pat_ep_rbio		
	<b>Collection methodology:</b> Collection directly from online database		
Limitations	<b>Limitations and ways to overcome them</b>  Data is available on the regional basis (NUTS 3), but not directly broken down by sector. However, this may be obtained upon request from the European Patent Office, which publishes regularly sector statistics on an EU level.		

N°22 Aquaculture production			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> tonnes live weight	<b>Geographic Level:</b> NUTS 0 (Member states) with precision for Atlantic coast (see Limitations)
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected results: (f), (h), (k)</li> <li>▶ It is linked with the impact ‘More competitive economy thanks to the “Blue economy”’ and reduced</li> </ul>		
	<b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 1.3. fostering adaptation and diversification of economic activities by promoting the potential of the Atlantic area</li> </ul>		
	<b>Definition</b> According to Eurostat, aquaculture also known as aquafarming refers to the farming of aquatic (freshwater or saltwater) organisms, such as fish, molluscs, crustaceans and plants for human use or consumption, under controlled conditions. Aquaculture implies some form of intervention in the natural rearing process to enhance production, including regular stocking, feeding and protection from predators.  Traditionally, in EU general statistics publications, data for the volume of the production are expressed in tonnes live weight of the product - or the mass or weight when removed from water.		
Sources	<b>Sources</b>  <i>Eurostat</i>	<b>Collection frequency</b>  <i>Annual</i>	
	<b>Link / Eurostat table</b> fish_aq2a		
	<b>Collection methodology:</b> Collection directly from online database		
Limitations	<b>Limitations and ways to overcome them</b> Data is available on the national level only. However, the Eurostat data enables to extract the contribution of maritime areas as well as the Atlantic waters itself, which gives the possibility to evaluate the aquaculture production of the Atlantic area by country.		

N°23 Protection of marine and coastal environment			
Definition	<p><b>Type:</b> Result indicator</p>	<p><b>Unit:</b> Multiple as indicator is composite</p>	<p><b>Geographic level:</b> Regional waters such as Bay of Biscay, Celtic Sea, Channel etc.</p>
	<p><b>Link with that AAP intervention logic</b></p> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: B. Reduced impact of climate change/Reduced carbon footprint in the Atlantic Region</li> <li>▶ It is linked with following results: (g), (h)</li> </ul> <p><b>Link with the AAP’s specific objectives:</b></p> <ul style="list-style-type: none"> <li>▶ 2.2 exploring and protecting marine waters and coastal zones</li> </ul> <p><b>Definition:</b></p> <p>The indicator measures if the water fulfills certain thresholds.</p> <p>The core marine environmental monitoring activity under the Joint Assessment and Monitoring Programme (JAMP) is the OSPAR Co-ordinated Environmental Monitoring Programme (CEMP). The CEMP is currently focused on monitoring of the concentrations and effects of selected contaminants and nutrients in the marine environment as follows:</p> <ul style="list-style-type: none"> <li>• metals (cadmium, mercury and lead) in sediment and biota</li> <li>• PAHs in biota and sediment</li> <li>• PCBs in biota and sediment</li> <li>• brominated flame retardants in biota and sediment</li> <li>• the effects of tributyltin in gastropods and concentrations in sediment and/or biota</li> <li>• nutrients in sea water</li> <li>• eutrophication effects</li> </ul> <p>The CEMP also includes a pre-CEMP covering components which the Contracting Parties are preparing to monitor in a co-ordinated manner through the development of monitoring guidance, quality assurance procedures and/or assessment tools. Currently the pre-CEMP includes the following components:</p> <ul style="list-style-type: none"> <li>• planar PCBs in biota</li> <li>• alkylated PAHs in biota and sediment</li> <li>• TBT in biota</li> <li>• PFOS in sediment, biota and water</li> <li>• dioxins and furans in biota and sediment</li> <li>• PAH- and metal-specific biological effects</li> <li>• general biological effects</li> <li>• beach litter</li> <li>• ocean acidification</li> </ul> <p>The geographical level reflects the marine areas under the Atlantic Action Plan.</p>		
Sources	<p><b>Sources</b></p> <p><i>OSPAR and the related data portal ICES.</i></p> <p><i>(OSPAR also issues quality status reports once a decade, i.e. 2000 and 2010)</i></p>	<p><b>Collection frequency</b></p> <p><i>Biannually</i></p>	
	<p><b>Link:</b> <a href="http://dome.ices.dk/osparmime/main.html">http://dome.ices.dk/osparmime/main.html</a></p>		

	<p><a href="http://www.ospar.org/">(further information on OSPAR can be found here: http://www.ospar.org/)</a></p> <p><b>Collection methodology:</b></p> <p>The Coordinated Environmental Monitoring Programme (CEMP) is that part of the monitoring within the JAMP where the national contributions overlap and are co-ordinated. The aim of the CEMP is to deliver comparable data from across the OSPAR maritime area, which can be used in assessments to address the specific questions raised in the JAMP.</p> <p>The MON assessments of CEMP data have emphasized the role of the assessments of temporal trends in monitoring data as indicators of the progress being made towards achieving near background, or close to zero, concentrations of contaminants, as appropriate. The assessments have been based on data held in the ICES Environmental Database and its successors.</p> <p><b>Components of the CEMP:</b></p> <p>These are those components for which all requirements for realisation of monitoring under the CEMP are in place (i.e. guidelines, quality assurance and assessment tools). Monitoring of the components of the CEMP is mandatory unless a Contracting Party can provide justification for “opting out”. Opting out should always be approved by the OSPAR subsidiary body responsible for assessment and monitoring.</p> <p><b>Components of the pre-CEMP:</b></p> <p>These are components which it has been agreed to be included as components of the CEMP but for which guidelines, quality assurance tools and/or assessment tools are currently lacking. Monitoring of the components of the pre-CEMP is voluntary on a temporary basis, pending the development of those requirements. At the point that a meeting of [HASEC<sup>2</sup>] recognises that all three of these requirements for coordinated monitoring are in place, the status will become mandatory. Contracting Parties undertake to support the development of the necessary tools as the basis for co-ordinated monitoring. The inclusion of elements in the pre-CEMP with a voluntary status is therefore intended:</p> <ul style="list-style-type: none"><li>(i) to stimulate the development of the tools needed for co-ordinated monitoring;</li><li>(ii) to provide an early warning to Contracting Parties to prepare for mandatory monitoring;</li><li>(iii) to signal OSPAR’s intention to commence co-ordinated monitoring.</li></ul> <p><b>Data reporting to ICES</b></p> <p>International Council for the Exploration of the Sea (ICES) is a science and data network. OSPAR and many others report data to ICES which serves as a prime source of data on marine environments.</p>
Limitations	<p><b>Limitations and ways to overcome them:</b></p> <p>Data consist of a number a composite indicator with many monitoring subprogrammes. Further data need to be collected from pdf document/webtool. This means that collecting and analysing data requires substantial work and it is difficult to present a simple indication of the environmental status of Atlantic marine waters. However, in time it can be expected that an overall indicator is developed showing whether “good environmental status” prevails or not.</p> <p>Low data coverage in Portuguese waters.</p>

<sup>2</sup> Where Ocean Acidification is concerned, CoG will be involved].

N°24 Marine protected sites			
Definition	<b>Type:</b> Results indicator	<b>Unit:</b> Surface in km <sup>2</sup> / number of sites / % in coastal area	<b>Geographic level:</b> Marine waters covered by the Atlantic Action Plan
	<p><b>Link with that AAP intervention logic</b></p> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: B. Reduced impact of climate change/Reduced carbon footprint in the Atlantic Region</li> <li>▶ It is linked with following results: (g), (h)</li> </ul> <p><b>Link with the AAP’s specific objectives:</b></p> <ul style="list-style-type: none"> <li>▶ 2.2 exploring and protecting marine waters and coastal zones</li> </ul> <p><b>Definition:</b></p> <p>The indicator measures the size of protected areas in the region.</p> <p>EEA have to set of data to describe the protected area one including national appointed areas and one with the areas of Natura 2000.</p> <p>The dataset contains data on individual nationally designated sites and designations in EEA member and collaborating countries. The Common Database on Designated Areas (CDDA) is more commonly known as Nationally designated areas. The inventory began in 1995 under the CORINE programme of the European Commission. It is now one of the agreed Eionet priority data flows maintained by EEA with support from the European Topic Centre on Biological Diversity. It is a result of an annual data flow through Eionet countries. The EEA publishes the data set and makes it available to the World Database of Protected Areas (WDPA). The CDDA data can also be queried online in the European Nature Information System (EUNIS).</p> <p>Natura 2000 is an ecological network composed of sites designated under the Birds Directive (Special Protection Areas, SPAs) and the Habitats Directive (Sites of Community Importance, SCIs, and Special Areas of Conservation, SACs).</p> <p>For each Natura 2000 site, national authorities have submitted a standard data form (SDF) that contains an extensive description of the site and its ecology. The European Topic Centre for Biological Diversity (ETC/BD), based in Paris, is responsible for validating this data and creating an EU wide <b>descriptive database</b>.</p>		
Sources	<b>Sources</b>	<b>Collection frequency</b>	
	European Environmental Agency (EEA)	Annually	
	<b>Link</b>	<a href="http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/european-protected-areas">http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/european-protected-areas</a>	
Limitations	<b>Collection methodology:</b>		
	Member State uploads data to EEA with information of the about the location and size of the protected areas.		
<b>Limitations and ways to overcome them:</b>			
The data are presented as maps and in dataset and to determine the size of the protected areas in the region will require the information to be extrapolated from the maps or the dataset. Thus, effort is needed in order to make information fit with the Atlantic area.			

N°25 Compliance with Marine Strategy Framework Directive			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Is the Atlantic Member State in compliance with directive: yes or no?	<b>Geographic level:</b> National
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: B. Reduced impact of climate change/Reduced carbon footprint in the Atlantic Region</li> <li>▶ It is linked with following results: (g), (h)</li> </ul> <b>Link with the AAP’s specific objectives:</b> <ul style="list-style-type: none"> <li>▶ 2.2 exploring and protecting marine waters and coastal zones</li> </ul>		
	<b>Definition:</b> The indicator assesses if the Member State fulfills the requirements of the MSFD directive, e.g. on reporting.		
Sources	<b>Sources</b>	<b>Collection frequency</b>	
	DG Environment	<i>According to the requirements of the directive</i>	
	<b>Link</b> <a href="http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/scoreboard_en.htm">http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/scoreboard_en.htm</a>		
Limitations	<b>Collection methodology:</b> DG-EVN register when the receive the reporting from the MS		
	<b>Limitations and ways to overcome them:</b> The limitation of the use of the indicator is that the information included on measures if the MS work accordingly to the directive with challenge of the ecological status of the marine waters. The effect of the management of marine waters would have to measure in other indicators related to the quality of the water linked to the descriptors of the directive events. Therefore the interpretation of the result of the indicator should be done carefully avoiding to assess the quality of the activities in the MS		
	Indicator is national. However, it can reasonably be assumed that there is a comparable level of compliance in each MS, thus the indicator expresses the Atlantic situation albeit national.		

N°26 Fisheries - Variety of species (landings)			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> tonnes live weight	<b>Geographic Level:</b> National
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected results: (f), (h), (k)</li> <li>▶ It is linked with the impact ‘More competitive economy thanks to the “Blue economy”’ and reduced</li> </ul>		
	<b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 1.3. fostering adaptation and diversification of economic activities by promoting the potential of the Atlantic area</li> </ul>		
	<b>Definition:</b> The Eurostat dataset includes landings of fish, crustaceans, molluscs and other aquatic organisms by species and fishing area for EU and associated countries (in live weight equivalent of the landings). More than 100 species are referenced in this category, including more than 30 types of fish, enabling thus to follow the variety of caught products.  Data for the volume of the production are expressed in tonnes live weight of the product - or the mass or weight when removed from water.  Besides the absolute values, it is useful to examine also the variety of species landed and the evolution of this variety. The Atlantic Action Plan makes in its operational objectives reference to the diversification of fishery products, which can be analyzed through concentration coefficients such as the cumulative share of the top 5 species.		
Sources	<b>Sources</b>  <i>Eurostat</i>	<b>Collection frequency</b>  <i>Annual</i>	
	<b>Link / Eurostat table</b>  fish_ca_atl21		
	<b>Collection methodology</b>  Collection directly from online database		
Limitations	<b>Limitations and ways to overcome them</b>  Data is available on the national level only. However, the Eurostat data enables to extract the contribution of the North-West Atlantic and North-East Atlantic areas, giving a clearer picture on the fisheries in the Atlantic area.		



N°27 Nights spent at tourist accommodation establishments in coastal regions			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Number	<b>Geographic level:</b> NUTS 2
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected results: (c), (j)</li> <li>▶ It is linked with the impacts ‘A. More competitive thanks to “blue economy”, ‘C. Better health, social inclusion and wellbeing of coastal populations’</li> </ul> <b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 4.2 Preserving and promoting the Atlantic’s cultural heritage</li> </ul>		
	<b>Definition:</b> Annual arrivals, nights spent at tourist accommodation establishments at NUTS 2 level, with the possibility to extract data for coastal areas and compare information for residents / non-residents and by type of accommodation: Holiday and other short-stay accommodation; camping grounds, recreational vehicle parks and trailer parks.		
Sources	<b>Sources</b> <i>Eurostat</i>	<b>Collection frequency</b> <i>Annual</i>	
	<b>Link / Eurostat table</b> tour_occ_nin2, tour_occ_nin2c		
Limitations	<b>Limitations and ways to overcome them</b> N/A		

<b>N°28 Increase in expected number of visits to supported sites of cultural and natural heritage and attractions</b>			
<b>Definition</b>	<b>Type:</b> Result indicator	<b>Unit:</b> visits/year	<b>Geographic level:</b> Atlantic Area
	<b>Link with the AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected results: (c), (j)</li> <li>▶ It is linked with the impacts ‘A. More competitive thanks to “blue economy”’, ‘C. Better health, social inclusion and wellbeing of coastal populations’</li> </ul>		
	<b>Link with the AAP’s specific objectives</b> <ul style="list-style-type: none"> <li>▶ 4.2 Preserving and promoting the Atlantic’s cultural heritage</li> </ul>		
	<b>Definition</b> <p>The <i>ex ante</i> estimated increase in number of visits to a site in the year following project completion. Valid for site improvements that aim to attract and accept visitors for sustainable tourism. Includes sites with or without previous tourism activity (e.g. nature parks or buildings converted to museum). One visitor can make multiple visits; a group of visitors count as many visits as many members the group has. The Managing Authorities set the methodology for estimating the expected number that can be based on demand analysis.</p> <p>The indicator enables to track of the estimation transformation of European funding to touristic sites in terms of the number of visits.</p>		
<b>Sources</b>	<b>Sources</b> <i>ERDF indicator Operational programmes</i>		<b>Collection frequency</b> <i>N+3, N+6</i>
	<b>Link:</b>		
	<b>Collection methodology:</b> Data to be collected from DG REGIO monitoring system.		
<b>Limitations</b>	<b>Limitations and ways to overcome them</b> <p>While this is an ERDF core indicator, regional managing authorities have the possibility to decide whether they will or not collect it. If this is not the case, proxy data on the visits to touristic sites may be collected from publication of National Statistics Institutes, national associations for tourism or ministries.</p>		

N°29 Number of vessels involved in accidents across the Atlantic area			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> number	<b>Geographic level:</b> Marine waters of the Atlantic Action PlanSea Basin
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: B. Reduced impact of climate change/Reduced carbon footprint in the Atlantic Region</li> <li>▶ It is linked with following results: (g), (k)</li> </ul> <b>Link with the AAP’s objectives:</b> <ul style="list-style-type: none"> <li>▶ 2.1 improving maritime safety and security</li> </ul>		
	<b>Definition</b> <p>The yearly review of the accidents provides selective and aggregated information on EU maritime accidents.</p> <p>The indicator measures the number of accident each year involving ships.</p> <p>More detailed information is available on the type of ship (Cargo, Tankers, Container, Passengers, Fishing, other) involved in the accident, the type of accident (Sinking, Collisions/Contacts, Groundings, Fire/Explosions, others) and the consequences (Lives lost, Pollution)</p> <p>The information contained in the review comes from a number of sources, including the media monitoring service of the European Commission, reliable accident information sources, recognised shipping information systems, the maritime and general media and a wide range of internet based publications (the acknowledgements at the end of the review show the most prominent sources). The information has been aggregated in a database in order to generate the tables, graphs, charts and maps in the document. Unless it states to the contrary, the figures in the text refer to the number of vessels involved, as opposed to the number of accidents. It is believed that the figures represent a relatively accurate overview of the accidents that happened in and around EU waters during 2010, although comprehensive reporting cannot be fully guaranteed.</p>		
Sources	<b>Sources</b>	<b>Collection frequency</b>	
	<i>EMSA - Maritime Accident Review</i>	<i>Annual</i>	
	<b>Link:</b> <a href="http://emsa.europa.eu/implementation-tasks/accident-investigation/items/id/1219.html?cid=141">http://emsa.europa.eu/implementation-tasks/accident-investigation/items/id/1219.html?cid=141</a>		
<b>Collection methodology</b> To be collected from the EMSA’s website.			
Limitations	<b>Limitations and ways to overcome them</b> The challenge is to determine the exactly the number of accident in the Atlantic region however a good approximation is easy the make. In the source, the Atlantic is grouped with the North Sea. Maps are available with information on the specific location of accidents, but the information included is only the number of accidents.		
	If precise results are needed the EMSA will have the detailed database and can be contacted. This will make it possible to refine data and depict the specific situation in the Atlantic and potentially also include causes of accidents and point to common challenges and solutions in the Atlantic area.		

<b>N°30 Number of non-indigenous species</b>			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Number of species affecting Atlantic area	<b>Geographic level:</b> Marine waters of the Atlantic Action Plan
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: B. Reduced impact of climate change/Reduced carbon footprint in the Atlantic Region</li> <li>▶ It is linked with following results: (g)</li> </ul> <b>Link with the AAP’s specific objectives:</b> <ul style="list-style-type: none"> <li>▶ 2.1 improving maritime safety and security</li> <li>▶ 2.2 exploring and protecting marine waters and coastal zones</li> </ul>		
	<b>Definition:</b> <p>Changes to ocean climate, particular sea temperature could allow some species to expand their ranges to become established in new regions, whilst some already introduced species could take advantage of warmer conditions to become more abundant.</p> <p>Some of these non-native species can be considered to be invasive if they spread rapidly and cause economic or environmental harm, or harm to human health. Most introductions arrive via human intervention, intentional or otherwise (e.g. aquaculture, ballast water).</p> <p>The indicator lists non-indigenous species detected in the Atlantic region.</p> <p>OSPAR gathers in the quality status report-report the identified non-indigenous species in the region.</p>		
Sources	<b>Sources</b> <i>OSPAR Quality Status Report</i>	<b>Collection frequency</b> <i>n-10</i>	
	<b>Link:</b> <a href="http://qsr2010.ospar.org/en/media/content_pdf/ch09/QSR_Ch09_EN_Tab_9_1.pdf">http://qsr2010.ospar.org/en/media/content_pdf/ch09/QSR_Ch09_EN_Tab_9_1.pdf</a> <b>Collection methodology:</b> <p>The data are gathered from different sources and not systematic. There is a need to monitor the effectiveness of this and other recently implemented measures on reducing introductions of non-indigenous species. Work under the EU Marine Strategy Framework Directive will provide a focus for this in seeking to ensure that non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems.</p>		
Limitations	<b>Limitations and ways to overcome them:</b> <p>Available data does only provide information on which non-indigenous species affects the Atlantic area. No information on trends and severity is given. An indicator showing the (change in) consequence of non-indigenous species presence, e.g. expressed in economic loss, is to prefer, but currently unavailable.</p> <p>Further are the data only presented from OSPAR every 10 years (next potentially in 2020) which rules out the possibility of a midterm evaluation using this indicator.</p>		

N°31 Flood directive: compliance with the article 6 (risk maps) and later 7 (FRMP)			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> Is the Atlantic Member State in compliance with directive: yes or no?	<b>Geographic level:</b> National
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: B. Reduced impact of climate change/Reduced carbon footprint in the Atlantic Region</li> <li>▶ It is linked with following results: (g), (k)</li> </ul>		
	<b>Link with the AAP’s specific objectives:</b> <ul style="list-style-type: none"> <li>▶ 2.2 exploring and protecting marine waters and coastal zones</li> </ul>		
	<b>Definition:</b> The indicator measures if the country fulfills the requirements of the flood directive. Directive 2007/60/EC (flood directive) on the assessment and management of flood risks sets out clear deadlines for each of the requirements. In order to monitor and inform about how well Member States follow the reporting obligations outlined above, an informal Floods Directive scoreboard has been developed by DG-ENV. The indicator or score board only provides an indicator of the requirements are fulfilled and does not, give any indication of whether the notified legislation is conformant to the requirements of the Directive, or if the reported information fulfills all requirements of the respective articles.		
Sources	<b>Sources</b> DG Environment	<b>Collection frequency</b> <i>According to the requirements of the directive</i>	
	<b>Link</b> <a href="http://ec.europa.eu/environment/water/flood_risk/timetable.htm">http://ec.europa.eu/environment/water/flood_risk/timetable.htm</a>		
	<b>Collection methodology:</b> DG Environment register when they receive the reporting from the MS		
Limitations	<b>Limitations and ways to overcome them:</b>		
	The limitation of the use of the indicator is that the information included on measures if the MS work accordingly to the directive with challenge of the floods. The effect of the management of floods would have to measure in the number of flood events. Therefore the interpretation of the result of the indicator should be done carefully avoiding to assess the quality of the activities in the Ms The indicator is national. However, it can be reasonably be assumed that there is a comparable level of compliance in each MS, thus the indicator expresses the Atlantic situation albeit national.		

N°32 Oil response vessels			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> No. of ships, capacity (m3)	<b>Geographic level:</b> Specific ports
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: B. Reduced impact of climate change/Reduced carbon footprint in the Atlantic Region</li> <li>▶ It is linked with following results: (g)</li> </ul>		
	<b>Link with the AAP’s specific objectives:</b> <ul style="list-style-type: none"> <li>▶ 2.1 improving maritime safety and security</li> <li>▶ 2.2 exploring and protecting marine waters and coastal zones</li> </ul>		
<b>Definition:</b> The indicator is the number of oil response vessels and their capacity  The indicator is used to illustrate the coordination to respond to the potential thread of oil spill. The interpretation of the indicator could be improved by comparing with the number of oil spills or the present of pollution in the waters.			
Sources	<b>Sources</b> European Atlas of the Seas, European Maritime Safety Agency	<b>Collection frequency</b> <i>Annually</i>	
	<b>Link:</b> <a href="http://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/#lang=EN;bkgd=5:1;mode=1;pos=11.754:54.898:4;theme=50:1:1">http://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/#lang=EN;bkgd=5:1;mode=1;pos=11.754:54.898:4;theme=50:1:1</a> ; <a href="http://emsa.europa.eu/oil-recovery-vessels/vessel-inventory.html">http://emsa.europa.eu/oil-recovery-vessels/vessel-inventory.html</a>		
	<b>Collection methodology:</b>  The Network of Stand-By Oil Spill Response Vessels has been built up and maintained through annual procurement procedures, which have been open to all interested parties, particularly those from the shipping or spill response industries, starting in 2005.  Accordingly, the current network provides at-sea oil recovery services from vessels based in all the regional seas of Europe. It should be noted that the vessels are at the disposal of all Member States regardless of their actual area of operation.		
Limitations	<b>Limitations and ways to overcome them:</b> No direct indicator. map has to be interpreted in order to assess specific levels in the Atlantic area		

N°33 Oil spills			
Definition	<b>Type:</b> Result indicator	<b>Unit:</b> tonnes	<b>Geographic level:</b> Atlantic area
	<b>Link with that AAP intervention logic</b> <ul style="list-style-type: none"> <li>▶ This indicator allows measuring following expected impact: B. Reduced impact of climate change/Reduced carbon footprint in the Atlantic Region</li> <li>▶ It is linked with following results: (g)</li> </ul> <b>Link with the AAP’s specific objectives:</b> <ul style="list-style-type: none"> <li>▶ Specific objective: 2.1 improving maritime safety and security</li> <li>▶ Specific objective: 2.2 exploring and protecting marine waters and coastal zones</li> </ul>		
	<b>Definition:</b> The indicator measures the quantity of oil spilled each year.  The statics also include information of the number of spills and the cause of the spill. Also there is information available on hazards substances.		
Sources	<b>Sources</b>	<b>Collection frequency</b>	
	<i>International Tanker Owners Pollution Federation (or EMSA, Atlas of the European Sea, Lloyd's register, EEA)</i>	Annually	
	<b>Link:</b> <a href="http://www.itopf.com">http://www.itopf.com</a> <a href="http://www.emsa.europa.eu/">http://www.emsa.europa.eu/</a> <a href="http://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/#lang=EN;bkqd=5:1;mode=1;pos=11.754:54.605:4;theme=1:0.8:1">http://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/#lang=EN;bkqd=5:1;mode=1;pos=11.754:54.605:4;theme=1:0.8:1</a> <a href="http://www.eea.europa.eu/data-and-maps/indicators/accidental-oil-spills-from-marine-shipping-1">http://www.eea.europa.eu/data-and-maps/indicators/accidental-oil-spills-from-marine-shipping-1</a> <a href="http://www.cedre.fr/en/cedre/index.php">http://www.cedre.fr/en/cedre/index.php</a>		
<b>Collection methodology:</b> The data are gathered in different sources create an estimate for the Atlantic region it is necessary to combine the information sources.			
Limitations	<b>Limitations and ways to overcome them:</b> Efforts necessary to interpret the Atlantic proportion of oil spills in the different sources.  Smaller spills not necessarily incl. and data is compiled udated irregularly. Further some information only depicts the number of spills in a specific location and not the quantity of oil spilled. There is no easy way to overcome these data challenges.		

## Annex: Complete list of indicators

For the complete list of indicators, please refer to the attached Excel table.



## **EY**

Assurance | Tax | Transactions | Advisory

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