

DG MARE

Elaboration of the Atlantic Action Plan

Boosting growth and employment through coastal and maritime tourism - Workshop Atlantic Forum (Cardiff, 24 January 2013)

Thematic report – February, 2012 (post-workshop)



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This report has been drafted by the Consortium, on behalf of DG MARE.

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1 Foreword

The Directorate General for Maritime Affairs and Fisheries (DG MARE) and the Atlantic Forum have initiated a stakeholder consultation process to contribute towards the development of an action plan for the Atlantic Ocean region.

To assist in the development of the action plan, five workshops have been planned. For each workshop, a thematic report is provided to inform the discussion and summarise the outcomes.

The purpose of the pre-workshop thematic report is to inform each workshop by providing background information on the proposed discussion topics and themes. The thematic reports suggest potential workshop questions in order to encourage topical discussions. Subsequent to the workshops, conclusions are incorporated into the thematic reports to take into account the key discussions points, comments and examples identified during the workshops.

After completion of the workshops, DG MARE will compile recommendations on priority research, investment and policy actions in the Atlantic Action Plan. The Atlantic Action Plan will address the five themes/challenges defined in the Atlantic Strategy (COM (2011) 782):

1. Implementing the ecosystem approach
2. Reducing Europe's carbon footprint
3. Sustainable exploitation of the Atlantic seafloor's natural resources
4. Responding to threats and emergencies
5. Socially inclusive growth

2 Introduction and context

The objective of this report is to present the topics that were addressed and summarise the discussion at the Atlantic Forum workshop in Cardiff held on 24 January 2013. The overall theme of the workshop was "Blue Growth: "The Community Dimension", which refers to maximising the potential of coastal communities based on both innovative and traditional sustainable economic use of the sea and its resources.

The overall objective of the workshop was to identify ways to encourage growth and employment in coastal regions in order to address the regional and territorial component of the Europe 2020 strategy. The theme of the workshop corresponds strongly to the fifth challenge in the Atlantic Strategy – Socially Inclusive Growth, which states:

"Whilst there is considerable variation along the Atlantic coast, many communities need to cope with a decline in employment in fisheries and shipbuilding, the shift of mass tourism to sunnier climes and the tendency of elderly people to choose the coast for retirement. The challenge is to ensure that new high-added value jobs are created at the coast and at the same that those who seek employment in the new economy have the right skills to do them".

The Cardiff workshop was organised into three sessions, which correspond to the key pillars of the Europe 2020 strategy.

- ▶ **Smart Growth:** improving the EU in terms of education (training and skills), research and innovation (creating new products/services that generate growth and jobs and help address social challenges), and the digital society (using information and communication technologies).
- ▶ **Sustainable Growth:** refers to building a more competitive low-carbon economy, protecting the environment, harnessing EU-scale networks and improving the business environment in order to create sustainable value and employment.
- ▶ **Inclusive Growth:** refers to creating employment, investing in skills & training, modernising labour markets and ensuring the benefits of growth are fairly dispersed.

2.1 Overview of Atlantic coastal communities

Prior to introducing the topics that were to be addressed in each of these workshops following the pillars described, the analysis in this section presents an overview of Atlantic region, in terms of key macroeconomic statistics covering the economy, population, labour market and key sectors.

The NUTS classification (Nomenclature of territorial units for statistics) is a hierarchical system for dividing up the territory of the EU for the purposes of collection, development and harmonisation of European statistics and a comparable territorial unit for socio-economic analysis. Eurostat, the statistical office of the European Union, defines three levels; NUTS 1 level, major socio-economic regions, NUTS 2, basic regions for the application of regional policies, and NUTS 3, small regions for specific diagnosis. The members of the Atlantic Arc Commission¹ are a mix of NUTS 1, NUTS 2, NUTS 3 and sub-NUTS 3 levels. This presents some difficulties presenting a comprehensive set of statistical data on the region, as Eurostat does not provide the same data for each level. When presenting key statistical indicators such as population growth, unemployment or age structure, the most precise analytical level possible will be used, given the availability of data. This report will use three different levels, to be denoted by a specific set of terminology.

- ▶ **Greater Atlantic Region** refers to 33 NUTS 2 level regions in the Atlantic area of Europe, including regions that are not members of the Atlantic Arc Commission
- ▶ **Atlantic Arc Commission** refers to the 21 regions of the Atlantic Arc Commission
- ▶ **Atlantic Coastal Communities** refers to the 84 NUTS 3 coastal regions of the Greater Atlantic Region

Other statistics, taken from various reports and studies, may also only be available at the national or regional level, particularly industry statistics. Unfortunately, disaggregated or more systematic presentation of data for

¹ The Atlantic Arc Commission is one of the six Geographical Commissions in the Conference of Peripheral Maritime Regions of Europe, and its action, although specific to the requirements of its member Regions, is part of a more general framework

some of these indicators is beyond the scope of this report. The following table presents the NUTS regions for each of these categories.

Greater Atlantic Region NUTS 2	Atlantic Arc Commission NUTS 2 & 3	Atlantic Coastal Communities NUTS 3	
<ul style="list-style-type: none"> Galicia (ES) Principado de Asturias (ES) Cantabria (ES) País Vasco (ES) Comunidad Foral de Navarra (ES) Andalucía (ES) Haute-Normandie (FR) Basse-Normandie (FR) Pays de la Loire (FR) Bretagne (FR) Poitou-Charentes (FR) Aquitaine (FR) Border, Midland and Western (IE) Southern and Eastern (IE) Norte (PT) Algarve (PT) Centro (PT) Lisboa (PT) Alentejo (PT) Cumbria (UK) Cheshire (UK) Greater Manchester (UK) Lancashire (UK) Merseyside (UK) Gloucestershire, Wiltshire and North Somerset (UK) Dorset and Somerset (UK) Cornwall and Isles of Scilly (UK) Devon (UK) West Wales and The Valleys (UK) East Wales (UK) South Western Scotland (UK) Highlands and Islands (UK) Northern Ireland (UK) 	<ul style="list-style-type: none"> Galicia (ES) Principado de Asturias (ES) Cantabria (ES) País Vasco (ES) Comunidad Foral de Navarra (ES) Andalucía (ES) Basse-Normandie (FR) Pays de la Loire (FR) Bretagne (FR) Poitou-Charentes (FR) Aquitaine (FR) Border, Midland and Western (IE) Norte (PT) Algarve (PT) Centro (PT) Lisboa (PT) Alentejo (PT) Lochaber, Skye & Lochalsh, Arran & Cumbrae and Argyll & Bute (UK) Dorset and Somerset (UK) Wales (UK) Dumfries & Galloway (UK) 	<ul style="list-style-type: none"> Pontevedra (ES) A Coruña (ES) Lugo (ES) Asturias (ES) Cantabria (ES) Vizcaya (ES) Guipuzcoa (ES) Huelva (ES) Cádiz (ES) Malaga (ES) Grenada (ES) Almería (ES) Pyrénées Atlantiques (FR) Landes (FR) Gironde (FR) Charente-Maritime (FR) Vendée (FR) Loire Atlantique (FR) Morbihan (FR) Finistère (FR) Côtes d'Armor Ile et Vilaine (FR) Calvados (FR) Manche (FR) Seine Maritime (FR) Border Region (IE) Western Region (IE) Border Region (IE) West Region (IE) Dublin Region (IE) Mid-East Region (IE) Mid-West Region (IE) South-East Region (IE) South-West Region (IE) Cavado (PT) Grande Porto (PT) Mino Lima (PT) Baixo Mondego (PT) Baixo Vouga (PT) Oeste (PT) Pinhal Litoral (PT) Grande Lisboa (PT) Península de Setúbal (PT) Alentejo Litoral (PT) Algarve (PT) Eilean Siar (UK) Orkney Islands (UK) Shetland Islands (UK) Caithness & Sutherland and Ross & Cromarty (UK) Lochaber, Skye & Lochalsh, Arran & Cumbrae and Argyll & Bute (UK) 	<ul style="list-style-type: none"> East Dunbartonshire, West Dunbartonshire and Helensburgh & Lomond (UK) Inverclyde, East Renfrewshire and Renfrewshire (UK) East Ayrshire and North Ayrshire mainland (UK) South Ayrshire (UK) Dumfries & Galloway (UK) West Cumbria (UK) East Cumbria (UK) Lancashire (UK) Blackpool (UK) Steffton (UK) Wirral (UK) Liverpool (UK) Cheshire West and Chester (UK) Flintshire and Wrexham Gwynedd (UK) Conwy and Denbighshire (UK) Isle of Anglesey (UK) South West Wales (UK) Swansea (UK) Bridgend and Neath Port Talbot (UK) Cardiff and Vale of Glamorgan (UK) Monmouthshire and Newport (UK) Bristol (UK) Bath and North East Somerset, North Somerset and South Gloucestershire (UK) Somerset (UK) Devon (UK) Cornwall and Isles of Scilly (UK) Plymouth (UK) Torbay (UK) Bournemouth and Poole (UK) Dorset (UK) North of Northern Ireland (UK) East of Northern Ireland (UK) Outer Belfast (UK) Belfast (UK)

A diverse region with a wide set of challenges...

The GDP of the Greater Atlantic region in 2009 stood at over 1,4 trillion, or 12,1% of the EU 27 budget, down from 12,7% in 2003². The average GDP/per inhabitant was roughly 22 000 Euros in 2009, about 95% of the European average (23 500)³. Two-thirds of the areas regions enjoy per capita GDP levels of at least 85% of the EU average, while a poor minority of regions have faced chronically weak economic activity.

The region provides a broad range of goods and services and includes both large metropolitan areas and small fishing villages. This diversity translates into a heterogeneous set of challenges for the region. Focusing on maritime areas, dominant, traditional industries such as fishing, aquaculture, agriculture and tourism represent the mainstay of economic activity. However, as these sectors undergo important transitions, innovation will be the key to finding their future growth potential. While the fishing industry has been shrinking over the past two decades and aquaculture has been largely stagnant since 2000, there is growth potential and opportunities to diversify (see subtheme 2). Coastal tourism, although it is considered a mature industry, is expected to grow over the next years and the changing tourism market presents unique opportunities to diversify into new forms of tourism (see subtheme 1).

Demographic evolutions will require targeted approaches...

The population of the Greater Atlantic Region in 2011 was just over 65 million, or almost 13% of the EU 27 population, over an area stretching some 594 000 km²⁴. Focusing on the Atlantic coastal communities, the population in 2009 was 46,5 million, or 9,3% of the total European population that year. Finally, the population of the Atlantic Coast just over 46 million in 2009⁵. Coastal NUTS 3 regions make up about 2/3 of the total NUTS 3 regions of the Greater Atlantic area and just under 73% of the population, meaning that there is a higher concentration of settlement along the littoral regions, with relatively sparsely populated areas inland⁶.

The total population of the Greater Atlantic Region has grown by just over 6% in the past decade, or at an average annual rate of just under 1%, compared with a slightly slower pace in the Atlantic Coast Communities of 5,4% between 2001 and 2009. A small number of high growth areas drives up the regional average, obfuscating a more general stagnant demographic dynamic in most regions. The population is also aging, with some regions, particularly Spain and Portugal, seeing shrinking populations in the younger age brackets. The fastest growing age bracket over the last decade was the 75 and over population. The shrinking base of working age adults points to the increasing need for initiatives to attract and retain skilled labour for maritime careers (see subtheme 3).

Training a labour force for the 21st marine economy...

In general, labour market statistics are in line with European averages, however, as has been noted across other dimensions of this region, there is a high amount of variation between areas, particularly in levels of educational attainment. The average employment rate for working age adults was 65% in 2011 and unemployment stood at 10,9% the same year in the Greater Atlantic Region⁷. The distribution of employment opportunity is not equal across the region, with areas of chronic weakness, as well as highly dynamic regions. Among the 55 – 64 bracket there is a much larger spread between the areas of the region, with employment rates ranging between 35% and 64%⁸. This diversity means that effective employment initiatives will need to be tailored to the challenges of specific areas and age groups (see subtheme 3).

Educational attainment has been improving over the past decade, although the Atlantic regions of Spain and Portugal lag behind the average significantly in upper secondary attainment and Portugal continues to suffer from a relatively low level of tertiary educational attainment. Closing these gaps in educational attainment will play an

² Eurostat Regional Statistics

³ *Idem*

⁴ *Idem*

⁵ *Idem*

⁶ *Idem*

⁷ *Idem*

⁸ *Idem*

important role in ensuring that the region has a competitive workforce. Furthermore, policy makers will need to ensure that the educational offering is geared to meet the challenges of the 21st century maritime economy (see subtheme 3).

Traditional sectors still hold growth potential...

Fishing, aquaculture and tourism are the principal sectors throughout the Atlantic Coastal Communities. Member States in the Atlantic region accounted for 74% of total EU catch in 2007⁹. In 2009, the fisheries industry employed over 75,000 people¹⁰ while the aquaculture sector employed about 18 000 (measured in full-time equivalents) in the five Member States of the Atlantic region. Furthermore, the fisheries and aquaculture sectors are only the beginning of a long value chain, which includes processing, wholesale, distribution and marketing. The Atlantic Coastal Communities can also boast the second largest concentration tourist capacity on Europe's coasts after the Mediterranean area with some 4,4 million bed places or 27% of the total bed places of Europe's NUTS 3 coastal regions¹¹. While considered mature, this labour intensive sector is expected to grow in the coming years.

While overreliance on these waning sectors presents a particularly challenging set of problems for coastal communities in the Atlantic region, there is still considerable growth potential for these sectors through diversification within the sectors and the identification of synergies between them. For instance, offshore aquaculture holds the potential to address some of the main barriers to growth in that sector and unlock growth (see subtheme 1) and developing new forms of niche tourism, such as ecotourism (see subtheme 1) can attract new market demographics, decrease reliance on seasonal mass tourism and find synergies with other sectors, such as gastrotourism (see subtheme 2).

2.2 Introduction to workshop themes

2.2.1 Smart Growth

The focus of the first workshop was on the **role of innovation in assisting coastal communities to address regional challenges and threats**, whilst at the same time creating employment and added value. Atlantic Member States face similar challenges, such as demographic changes and shifts in purchasing power, increased competition from abroad, and seasonality in tourism. Smart growth is about creating new products/services that will generate growth and jobs and address these challenges. There is a need for Atlantic coastal communities to act collectively and share successful and innovative experiences in order to maximise the benefit for all.

Discussions and presentations in this workshop aimed to focus on how the coastal and maritime tourism sectors can evolve and innovate in order to promote the regions' assets, attract tourists, and overcome structural challenges. Topics of discussion included the role of culture, sport and heritage in boosting tourism, and innovative approaches to overcome seasonality in tourism.

2.2.2 Sustainable Growth

This second workshop sought to focus on how **coastal communities can address challenges facing the sustainable development of aquaculture and fisheries industries** in order and achieve sustainable economic growth and employment. As many communities on the Atlantic coast are dealing with the challenge of economic restructuring following the general decline of the traditional fishing industry in Europe, fostering new and innovative economic opportunities for the next generation is vital to ensure the future of coastal communities. The pattern of this growth is also important, with a particular emphasis being placed on innovative approaches, inclusiveness and sustainability.

⁹ Eurostat Fisheries Statistics

¹⁰ Facts and figures on the Common Fisheries Policy 2012. European Commission

¹¹ Eurostat Regional Statistics

Discussions and presentations in this workshop aimed to focus on innovative approaches to add value to fisheries and aquaculture products, diversification of marine and coastal activities and possibilities to develop tourism through links to the seafood sector.

2.2.3 Inclusive Growth

The third workshop focused on the **human element relating to coastal communities**, representing the core focus of the Cardiff workshop as it directly relates to the fifth challenge outlined in the Atlantic Strategy – “*to ensure that new high-added value jobs are created at the coast and at the same that those who seek employment in the new economy have the right skills to do them*”. This session sought particularly address the demographic changes and challenges faced by coastal communities, and provide innovative ideas regarding how employment opportunities can be promoted, careers developed, and knowledge and skills retained.

The third workshop therefore aimed to provide an overview of the demographic challenges facing coastal communities, and involved a discussion on potential measures and methods that need to be put in place to address these. Areas of focus included nurturing youth coastal employment, providing training, knowledge and skills development /retention, encouraging valorisation of marine cultural traditions, developing innovative approaches targeting the elderly coastal population.

2.3 Structure of thematic report

The following chapters of this thematic report will be presented as follows:

- ▶ **Workshop discussions:** a summary of key workshop discussion points and comments, in terms of the gaps identified, actions identified to address these gaps, and example illustrative projects, where relevant. The purpose of this summary is to enable DG MARE to gain an understanding as to the key themes and conclusions of the workshops.

This summary will then be followed by the pre-workshop thematic reports for each of the three themes, in terms of:

- ▶ **Context, baseline and trends:** this section provides an introduction to the workshop themes, defines important concepts, and discusses the past and future trends and challenges
- ▶ **Challenges and gaps:** this section outlines the challenges faced by coastal communities and suggests the gaps that need to be addressed in a coordinated manner through collective action.
- ▶ **Potential areas for future action:** this section provides a list of identified research and investment priorities, which can act as preliminary ideas for discussion regarding Atlantic cooperation. This section also suggests a number of questions that may be addressed during the sessions.

3 Workshop discussions

This chapter summarises the discussions held at the workshops for the three subthemes of the Cardiff workshop. An introduction to the baseline situation is provided, as well as identified gaps, any suggested actions to address the gaps, and example illustrative projects, where relevant.

Smart Growth

Theme	Baseline situation	Gap	Possible actions to address gaps	Examples of projects/ good practices
Engagement of Community and SMEs	<p>Engagement with the local coastal communities directly impacted by coastal activities and tourism was highlighted as a key ingredient for smart growth. As an example, the Welsh approach to coastal tourism is built around 3 key pillars: Community, Environment and Enterprises. A coastal tourism steering group is a cross departmental multi-stakeholder steering group that has developed a draft action plan for 2013-2016, emphasising the importance of community buy-in.¹²</p> <p>Furthermore, SMEs represent approximately 80% of operators in coastal tourism. The sector is therefore dependent on SMEs for innovation and sustainable growth. Effective engagement with the public sector and other stakeholders is therefore essential, particularly in terms of access to finance and investment in innovation and sustainable approaches.</p>	<p>It has been argued that SMEs are not sufficiently actively engaged with the public sector, in terms of setting coastal tourism strategies and developing innovative and sustainable offers.¹³ They are resource restricted due to access barriers to financing, and therefore are not always willing to invest in sustainable ways.</p>	<p>Tourism strategies need to be set using the input of multiple stakeholders. Initiatives need to be developed that facilitate access to finance for tourism SMEs and incentives put in place to convert to more sustainable practices.</p>	<p>None mentioned</p>

¹² Presentation by Gerwyn Evans on “Welsh approach to coastal tourism”

¹³ Presentation by Calvin Jones on “Quality, innovation, and fighting seasonality in the tourism industry”

Destination management	<p>Another recurrent theme in the Smart Growth workshop of the Cardiff was the need for a “destination management approach”.</p> <p>Presenters highlighted the need to create and package successful destinations through innovation. As an example, the Irish Tourism Strategy is seeking to develop key strategic destinations. It has been recognised that analysis must be made on consumer insights and trends, looking at new and emerging markets.¹⁴</p> <p>According to the Blue Growth final report, “growing demand for unique experience and value-for-money will shape parts of the sector”. Furthermore, it is stated, “an ageing population and a larger share of educated citizens will lead to more demand for ‘customised experiences’”.¹⁵</p> <p>Furthermore, it was argued that first of all we have to make the destination a better place to live, before then inviting others (tourists) to share it, noting that market surveys have found that visitors and residents have similar priorities and values in a coastal destination.¹⁶</p>	<p>It was noted that the tourism industry is not sufficiently innovative, focusing more on reproducing ideas and models used elsewhere.¹⁷</p> <p>Too much focus has been given to the big hotel players in determining strategy, however they can suffer from short sightedness and ignore what happens in the visitor’s experience between 8am and 8pm when they are not at the hotel.¹⁸</p>	<p>There is a need for a coordinated strategy to coastal tourism through packaging destinations. Destinations should be packaged on a transnational Atlantic basis, recognising that competition amongst Atlantic destinations is not beneficial for the sector as a whole.</p> <p>As part of this approach, strong engagement with SMEs and the community is necessary, in order to promote innovation and growth, whilst respecting the natural environment and living conditions of coastal populations.</p>	<p>A number of innovative, outside the box ideas provided food for thought in rendering Atlantic coastal regions more attractive as destinations.¹⁹ However there applicability in the context of an Atlantic Action Plan is not obvious.</p> <p>Nevertheless, ideas included tourist voluntary participation in environmental projects, Blackpool comedy carpet, and the lighthouse, crane and lifeboat hotels of Harlingen.²⁰</p>
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¹⁴ Presentation by Ethna Murphy from Irish Tourism Board

¹⁵ Blue Growth Final Report, August 2012

¹⁶ Presentation by Malcolm Bell, Head of Tourism at Visit Cornwall

¹⁷ Presentation by Terry Stevens on "Innovation and Creativity - The Essential Ingredients for Successful Coastal Destination Development"

¹⁸ Presentation by Ethna Murphy from Irish Tourism Board

¹⁹ Presentation by Terry Stevens on "Innovation and Creativity - The Essential Ingredients for Successful Coastal Destination Development"

²⁰ Presentation by Terry Stevens on "Innovation and Creativity - The Essential Ingredients for Successful Coastal Destination Development"

Cruise tourism development model	<p>One discussion point that divided workshop participants was regarding the potential for cruise tourism. One the one hand, the Blue Growth Final report asserts that the EU retains a strong global position in both the construction of cruise ships and in terms of attractive destinations and port infrastructures. Employment has grown in Europe from 200,000 in 2000 to 300,000 in 2010 and is expected to further expand to 400,000 in 2020.²¹</p> <p>Furthermore, it was argued during the workshop that not only can cruise passengers bring 1.3 million euro spend into a city in a day, but the occasion can attract local residents.²²</p> <p>Others present a cynical view of the potential growth of the industry, explaining how cruise tourism only represents 2% of global ships, 335 ships (additional 35 commissioned) and 85% of the market share is held by 3 companies.²³ Not to mention the ecological footprint associated with potential growth in the sector.</p>	The discussions revealed a lack of conclusive arguments regarding the future growth of cruise tourism for the Atlantic. It revealed the need for sustainable business models and investment in port infrastructure. ²⁴	<p>An appropriate development model for cruise tourism needs to be carefully considered. The contrasting objectives of operators (profits on board) versus destinations (tourism spend at destination) need to be addressed in a balanced manner.²⁵</p> <p>The nature of the industry potentially calls for niche markets to be identified. Analysis could be undertaken to determine what cruise tourism niche operators could provide to consumers through small to mid-sized ships.²⁶</p>	None mentioned
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²¹ Blue Growth Final Report, August 2012

²² Remark made (person not identified) during question time following Malcolm Bell's presentation

²³ Presentation by Terry Stevens on "Innovation and Creativity - The Essential Ingredients for Successful Coastal Destination Development"

²⁴ Remark made (person not identified) during question time following Malcolm Bell's presentation

²⁵ Presentation by Calvin Jones on "Quality, innovation, and fighting seasonality in the tourism industry"

²⁶ Remark made (person not identified) during question time following Malcolm Bell's presentation

Importance of marine leisure and watersports	<p>Marine leisure and watersports were highlighted by a number of participants as key enablers to growth in coastal regions. The Blue Growth Final Report notes that 10 million people in the world travel each year to wind and wave surfing destinations and the trend is growing, and 500 thousand more people every year practice this sport. This is particularly relevant for Portugal, Spain, France and the UK.²⁷</p> <p>The Blue Growth final report mentions a project called Nautisme Espace Atlantique (NEA2) in. However this case study in the report focuses on its potential to attract tourism, and does not emphasise the importance of marine leisure and watersports for coastal populations.²⁸</p> <p>A presentation on NEA2²⁹ highlighted that marine leisure and watersports covers a number of different areas, not limited to recreational ports and sporting activities, and that a NEA3 project provides strong potential for the future, through 3 key ingredients:</p> <ol style="list-style-type: none"> 1) Growth of enterprises through innovation – e.g. ships of the future, export assistance 2) Development of a well know tourist destination – e.g. Development of EU Atlantic Brand 3) Deliver on skills, competencies and training <p>The project adopted a two-tiered approach, characterised by a small number of generic actions across partners (around 20) and a larger number of local actions implemented by partners (around 80). Strong coordination at the regional level was cited as a key factor for success.</p>	<p>It was argued that too little focus has been given to marine leisure and watersports as an enabler for jobs and economic growth in coastal communities.</p>	<p>Delivery of a transnational project oriented towards innovative approaches, creating a unifying identity and image for the Atlantic area, and developing skills to match the employment possibilities.</p> <p>Projects are needed that valorise marine culture, heritage, sports and education. Examples of three key projects in the Atlantic Area were cited: NEA3, Atlantic Watersport Games, Atlantic Class Project.³⁰</p>	<p>NEA2 is project addressing the sustainable development of marine leisure and watersports in the Atlantic Area. It follows NEA1 which brought together 11 partners from 7 regions, 5 countries.</p> <p>The NEA2 project has a more ambitious vision, bringing together 23 partners from 8 regions, in order to : 1) assess the current situation in the marine leisure industry, 2) identify and share best practice, 3) work with marine leisure businesses and service providers to improve their environmental/energy/social equity status, 4) support innovation, 5) assess skills needs of businesses in the sector and develop and deliver training, 6) support participation at marine leisure/watersports industry events, exchanges and conferences, and 7) market the sector to the world.</p>
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²⁷ Blue Growth Final Report, August 2012

²⁸ Blue Growth Final Report, August 2012

Sustainable growth: The role of the seafood sector

Theme	Baseline situation	Gap	Objectives / possible actions to address gaps	Examples of projects/ good practices
Sustainable fisheries	<p>Fish consumption is expected to rise steadily over the next few years, but there is little potential for growth in fisheries. It would be possible to fish 'smarter', e.g. market new fish species, but consumer taste in fish is notoriously conservative. Furthermore, there remains an issue with high discards in particular zones.</p> <p>There has been much debate within the industry on the extent to which sustainable fishing can be profitable or to which there is benefit in having sustainable products. This takes investment (to prove you are fishing sustainably and in new gear etc) and is more costly, and, while sustainability has become more important for consumers, cost remains a fundamental factor. It will take a lot of effort and money to change consumer demand.</p>	<p>Improvements to be made in exploitation of fish resources available</p> <p>Unwillingness to pay for fresh European /Atlantic fish, lack of right investment and buy-in from industry itself</p> <p>It is not possible to produce enough European fish for the European market in a sustainable manner</p> <p>Knowledge of where in particular the discards occur</p>	<p>Better use of equipment and therefore smarter fishing. New equipment has been invented that needs to be implemented on a broader scale.</p> <p>The vessel fleet can be put together differently allowing to build more economically sound business cases for the operating vessels.</p> <p>Create an Atlas mapping the regions of by-catch and high discards</p> <p>Make fishing sustainably easier for fishermen, concerted investment is needed to bring about changes in consumer preferences</p>	None mentioned

Sustainable fisheries - shellfish	<p>There is potential to increase shellfish fisheries (it was stated up to 100%)</p> <p>This was more a case study of the possibilities of increasing yields in general.</p>	<p>Corporation with e.g. Wind energy facilities</p> <p>Ability to fish shellfish further offshore</p> <p>Research is the essential component of understanding how harvest can be increased, quite complex, especially with delicate products such as shellfish</p>	<p>Invest in the development of ways to fish shellfish further offshore</p> <p>Get researchers and producers to cooperate on key issues</p>	None mentioned
Aquaculture	<p>Little activity in the aquaculture industry. The subject was not touched upon extensively, but one presenter mentioned that he was not optimistic about the potential for aquaculture growth, mentioning that a key factor is labour costs. Currently it is too expensive to compete at market with many global players especially from Asia. This said, there is great potential in the Atlantic due to space and lower environmental impact in deep waters.</p>	<p>Knowledge of the environmental impact at deep sea.</p> <p>Considerable barriers to growth (cost, administrative burden, regulatory uncertainty, etc)</p>	<p>Explore the option of combining with renewable energy activities offshore such as wind power.</p> <p>Facilitate licensing (better assessment of environmental impacts)</p> <p>Improve awareness of the location from where the fish originates</p>	None mentioned

<p>Diversification in the seafood sector (the example of gastrotourism)</p>	<p>With the traditional fishing industry waning, the sector needs to find new and innovative sources of income to ensure the sustainability of jobs in this sector. Tourism is an example of 'peripheral diversification' within the seafood sector that has potential to bring more added-value to local fishermen and restaurant owners.</p>	<p>It is difficult to encourage this kind of cooperation among local actors. It is much more complex than simply building infrastructure and 'waiting for the tourists to come'.</p>	<p>Facilitate the creation of networks at different levels.</p>	<p>Successful branding schemes for regions involving seafood (Portugal/Spain particularly)</p>
	<p>Despite the attention it has garnered, this is still a relatively isolated phenomenon. There are few local examples where networks have been created between local food production and tourism activities.</p>	<p>The direct economic potential may be limited, despite the broader indirect benefits.</p>	<p>Give seafood a central place in the branding of regions, but also local identity.</p>	
	<p>All presenters in the afternoon have tapped into local tourist flows as one of their key markets, as well as high end restaurants, mail order etc. Much of their work was totally organic and they slowly created networks with other actors in the area.</p>	<p>Important investments need to be made in order to raise the profile of local food products (including seafood) abroad.</p>	<p>Create networks of local producers. Possible also other local activities such as e.g. sport clubs</p>	
	<p>Aside from the direct economic impact (more added-value for local business and job creation), food also plays an important role in the 'branding' of areas, particularly coastal regions. Portugal is one example of a country that has put seafood and maritime culture at the centre of its identity.</p>		<p>Network of food festivals</p>	
	<p>Gastrotourism can also be a component of a broader strategy to promote local sourcing and consumption among citizens. Food is an essential part of culture, especially for coastal areas.</p>		<p>More generally, promote initiatives that find innovative ways to bring new revenue streams to the seafood sector.</p>	

Integration of
SMEs

Few SME engage or are engaged in strategic work (economic development plans, local tourism strategies), yet they are the foundation of the local economy and the principal service providers in the tourism industry.

Many stakeholders in the seafood and tourism/gastrotourism sectors are SMEs.

All levels of government have a poor track record of engaging SMEs. Most of the successes presented in the workshop were 100% organic, in other words, local business owners that built up their businesses slowly over decades.

These SMEs tend to have limited resources to spend on new activities and innovation.

Too few SME are involved in these innovation activities, tourism strategies and development planning.

Promote networking between SMEs (local producer organisations, cross-sector partnerships etc).

Facilitate the creation of common projects.

Branding together which also includes SMEs.

4 Subtheme 1 – Smart Growth

'Smart growth' is one of the three priorities promoted by the Europe 2020 strategy. Smart growth refers to improving the EU's performance in education (encouraging people to learn, study and update their skills), research/innovation (creating new products/services that generate growth and jobs and help address social challenges), and digital society (using information and communication technologies).

In the context of the Atlantic Forum workshop in Cardiff, the focus was on encouraging innovation as a way to take advantage of the strength and resources of coastal regions in the field of **tourism**. Smart growth through innovation is essential in boosting the European tourism industry, and particularly in the Atlantic. Atlantic coastal regions face similar challenges, such as demographic shifts, increased competition from abroad and seasonality in tourism. As a consequence, there is a need to cooperate and share innovative ideas in order to face these challenges together.

4.1 Overall context

Maritime and coastal tourism is an important growth sector in Atlantic regions

At a European level, the tourism industry has become a **sector of major importance in the economy** as a whole. Europe is the most frequently visited region in the world: according to the UNWTO, about half of the international tourist arrivals in 2011 were in Europe (503,9 million visitors in 2011)³¹.

Because of the presence of the oceans, seas and the natural environment, coastal zones have an important tourism function. Furthermore, tourism is a relatively labour intensive sector, meaning that there is a high ratio of growth to job creation. The Atlantic's rough natural beauty, rich biodiversity, traditional seafood cuisine and Celtic culture are assets that can be readily exploited.

Figure 1: Key maritime tourism activities based on size (2008 or latest available year), recent growth (average annual GDP growth last 5 available years) and potential (ranking 1-6 with 6 highest), source: Blue Growth Final Report

Maritime economic activity	Size today (EUR billion)	Recent growth	Future potential
Coastal tourism & yachting	144	3 - 5 %	4
Cruise tourism	14,1	12,30%	5

Coastal tourism is a mature economic activity and a core ingredient for Blue Growth. It is an industry that employs over 2 million people in Europe and provides a mainstay to many local economies. In addition to this, there are another quarter of a million are in yachting and marinas, while cruise tourism employs 150 000 jobs and generates a direct turnover of 14.5 billion euro.³² Despite being a mature sector, coastal and maritime tourism still carries significant economic potential, and is expected to grow by 2 to 3% by 2020³³.

More than a third of the value of the maritime sector in the North-East Atlantic is generated by coastal tourism and shipping, with tourism and the fishing industry being the largest employers.³⁴ In France, Portugal and Spain coastal tourism is the largest employer of the maritime industries. Coastal tourism will remain an important source of income for local communities, creating jobs due to the important amounts of money that coastal tourism attracts. The added value of coastline tourism, yachting and marinas and cruise tourism in Europe in 2011 is estimated at €158,5 million³⁵.

³¹ UNWTO

³² Blue Growth, Final Report Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coasts, 13 August 2012

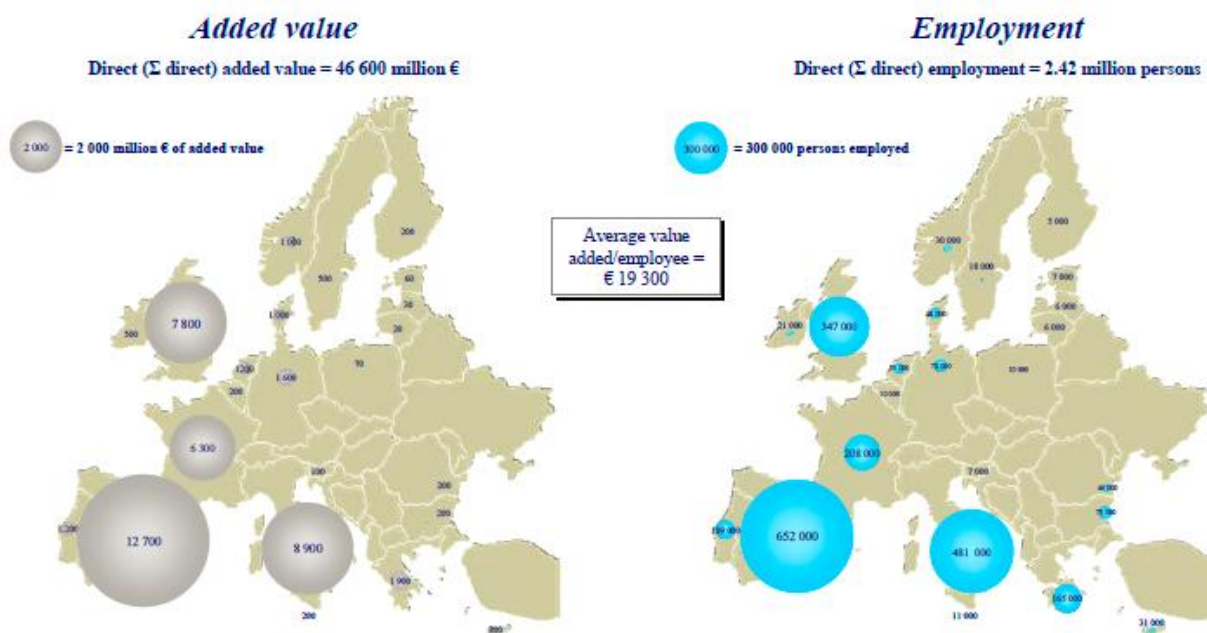
³³ Speech by Maria Damanaki, "Maritime and Coastal Tourism: The Way Ahead", http://ec.europa.eu/commission_2010-2014/damanaki/headlines/speeches/2012/09/20120927_speech_en.htm

³⁴ Blue Growth, Final Report, Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coasts, 13 August 2012

³⁵ Blue Growth, Final Report, Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coasts, 13 August 2012

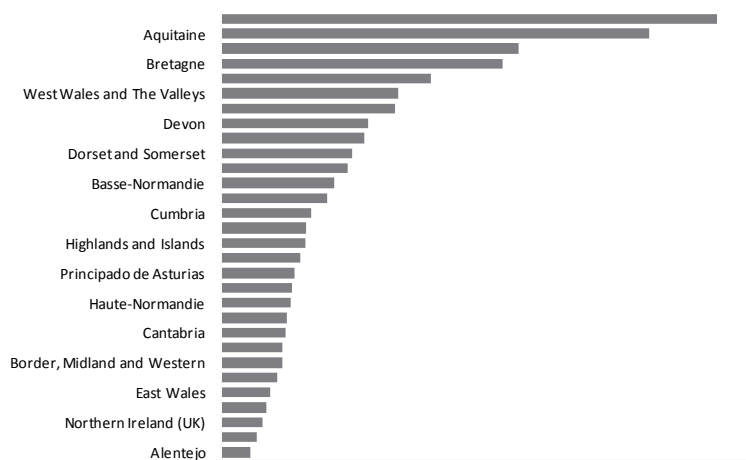
The figure below shows the importance of coastal and marine tourism from a study undertaken in 2008³⁶, which shows particularly the prominence of the Atlantic Member States. The 5 Atlantic Member States represent €28.5 billion (61.1%) in added value out of a total of €46.6 billion, and 1.33 million (55%) out of the 2.42 million employed in the sector in Europe. These figures confirm the important role of the Atlantic Region in coastal and marine tourism in Europe.

Figure 2: Added value and employment for Coastal and Marine Tourism in the EU and Norway, source: Policy Research Corporation, cited in "The role of Maritime Clusters to enhance the strength and development of European maritime sectors", a reported commissioned by DG MARE in 2008



While limited amounts of data are available for the Atlantic region in particular, a couple key figures suffice to paint a picture of the importance of tourism to the Atlantic region. In 2011, tourists spent 232 million nights in Greater Atlantic Region accommodations. This number represents just over 17% of the EU total for that year.

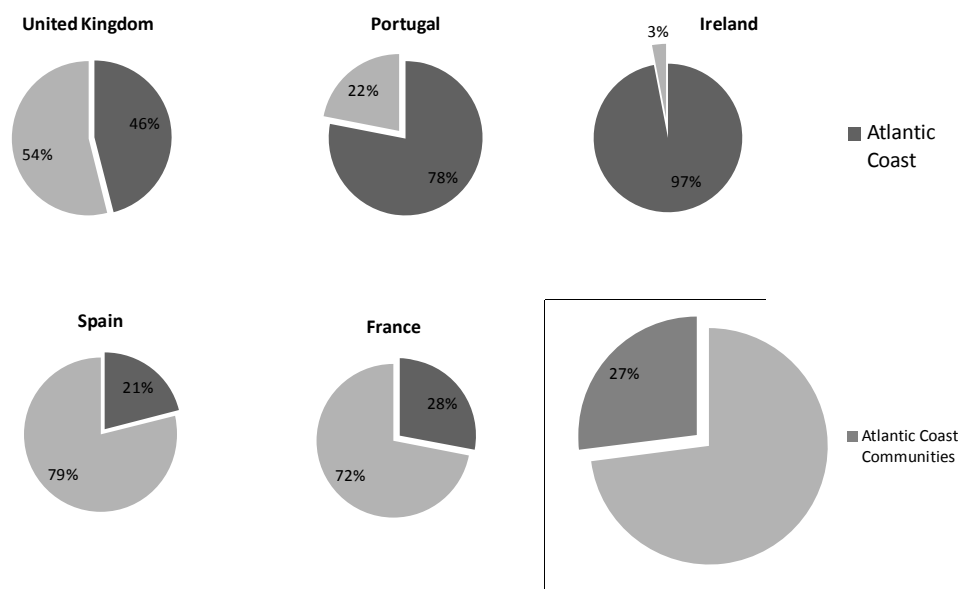
Figure 3: Nights spent in tourist accommodations, source: Eurostat/Ernst & Young



³⁶ Policy Research Corporation, "The role of Maritime Clusters to enhance the strength and development of European maritime sectors", a reported commissioned by DG MARE in 2008

Looking particularly at the Atlantic Coastal Communities, these areas can boast a high tourism capacity, with 4,4 million bed places, which represents 27% of Europe's coastal regions' total capacity and 15% of the total EU 27 capacity³⁷.

Figure 4: Percentage of coastal region bed places in Atlantic Coastal regions and percentage of bed places located in NUTS 3 Atlantic regions out of national total, source: Eurostat/Ernst & Young



The figure above shows that the coastal regions of the Atlantic area represent important parts of the total national capacities, ranging from 21% in Spain and 28% in France, which also have long Mediterranean coastlines to almost 97% in Ireland³⁸.

The average growth rate of the tourism industry³⁹ in the Greater Atlantic Region over the past decade has been growing at an average rate of 2%. Two-thirds of the NUTS 2 in the Greater Atlantic Region saw positive average annual growth rates. Averages reached as high as 12% for regions in Wales. Other growth areas were Spain (Pais Vasco, Navarra) and France (Pays de la Loire and Aquitaine).

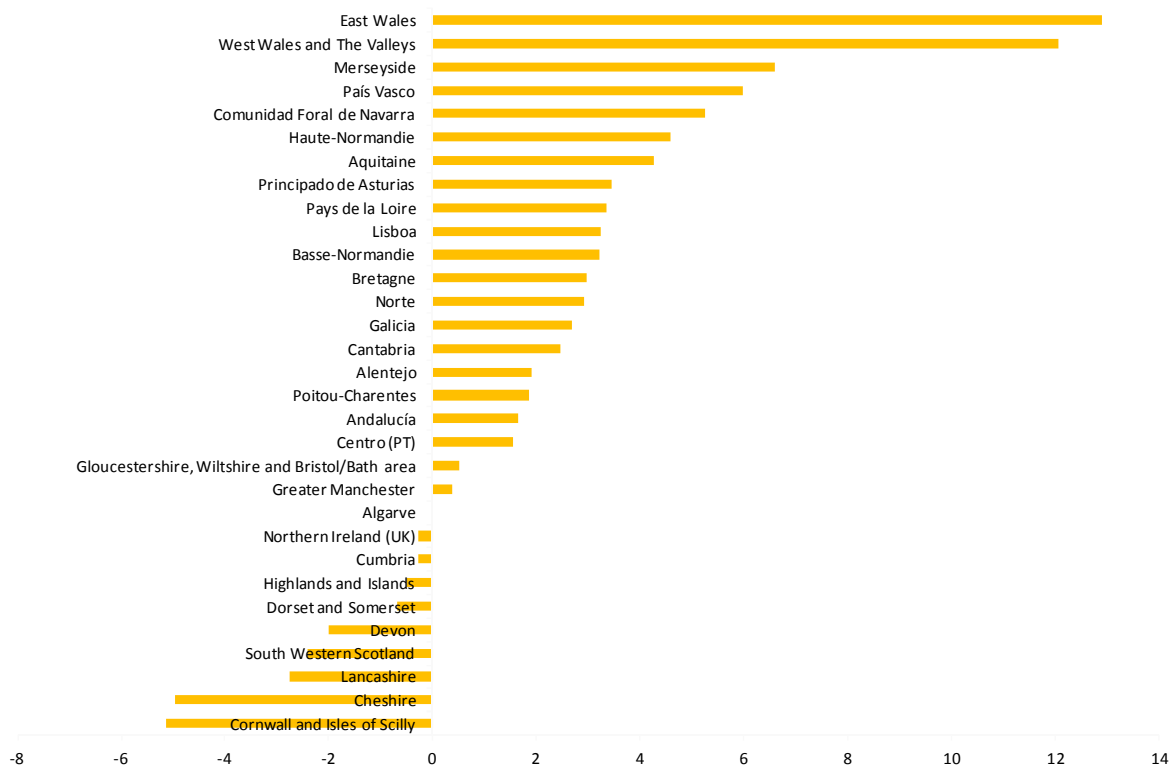
One of the factors behind the high growth in Wales is the rise of what some have begun to call the 'staycation' following the economic crisis, short trips from neighbouring regions. The Great Britain Tourism Survey showed that these had increased by 20% in 2011, attracting 9,7 million visitors. These 'holiday trips' accounted for 62% of visitors to Wales that same year

³⁷ Eurostat Regional Statistics

³⁸ *Idem*

³⁹ Collective tourist accommodation

Figure 5: Average annual growth of tourism industry in the Greater Atlantic Region 2002 – 2011, source: Eurostat



However a number of challenges must be faced by Atlantic Member States in order to benefit from Blue Growth projections.

These challenges might be summarised in four categories as follows:

- ▶ The tourism industry in Europe is facing increased competition from abroad. Europe will need to develop and highlight its special characteristics in order to create a “niche” market, such as through cultural events, historical heritage and sports events, taking advantage of the existing infrastructures that exist across Europe.
- ▶ In the Atlantic, as for other basins in Europe, the tourism industry is shaped by a highly seasonal demand, characterised by the stronger influx of visitors in spring and summer. This characteristic has various repercussions on the whole structure of the industry, including the labour market, the supply chain for the industry and even the environment.
- ▶ Although tourism is one of the major employers on the Atlantic Coast,⁴⁰ the jobs created are often precarious and there is a strong turnover. The seasonal nature of economic activity also induces a strong pressure on finite natural resources, and on fragile historical sites and monuments.
- ▶ There is also a strong demand for sustainability from both the tourism industry and visitors. In order to limit the negative impacts of increased tourism activity, research on coastal protection and the synergies between tourism and coastal regeneration is being undertaken at national and regional levels. The need for coastal protection is expected to increase given climate change and rising sea-levels. Coastal protection activities, an area where EU players fulfil a crucial role, involve construction, dredging and shipbuilding. This has a strong influence on tourism in terms of innovation through ecotourism and coastal regeneration.

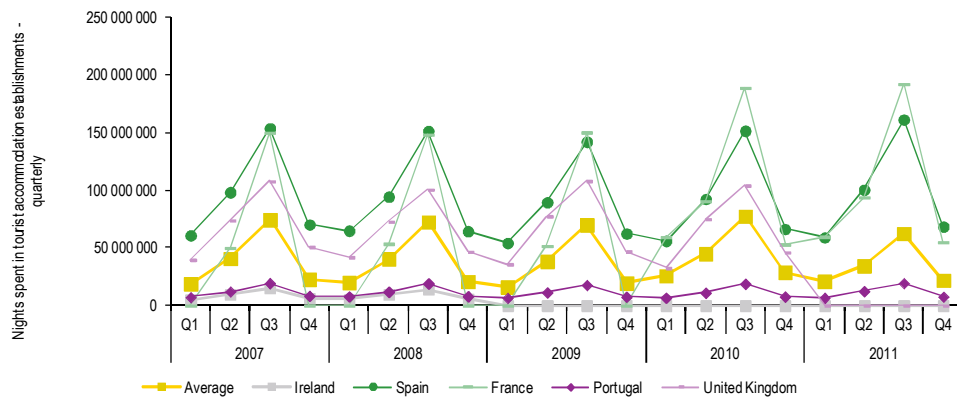
⁴⁰ A draft Marine Research Plan for the European Atlantic Sea Basin, SEAS-ERA WP 6.1

4.2 Baseline and trends

4.2.1 Atlantic Member States are strongly affected by seasonality in the tourism sector

As mentioned previously, the tourism industry in Europe and on the North-East Atlantic is subject to significant seasonality. This seasonality can be partially explained by a more clement weather during spring and summer, which is more favourable for many of the outdoor tourism activities. The figure below illustrates nights spent in tourist accommodation. It shows that from 2007 to 2011, seasonality has gradually increased: from 3,3 times as many arrivals in summer than in winter in 2007, to 5 times as many arrivals in summer than in winter in 2011. Seasonality is experienced by all Atlantic Member States in a similar manner⁴¹.

Figure 6: Nights spent in tourist accommodation establishments in Member States on Europe's Atlantic coast- quarterly - in 2011, source Eurostat



As for tourism intensity,⁴² a total of 30 EU regions recorded a tourism intensity of more than 10 000 overnight stays (in hotels, campsites or other collective tourist accommodation) per 1 000 inhabitants in 2010:

- ▶ six were in the United Kingdom (data are for 2009),
- ▶ two each in Spain, the Netherlands and Portugal,
- ▶ one each in Finland and France (2009).

There is ongoing research on how to develop coastal tourism that is less influenced by seasonality. The most relevant tourism activities for the development of a competitive and sustainable coastal and maritime strategy for Europe are, according to the majority of the participants in the consultation, non-beach related tourism activities (e.g. heritage based tourism, cultural tourism, and gastronomic events) and yachting, boating and cruising. Ecotourism, beach-based recreational tourism and nautical sports followed in the list of preferred activities with potential to foster the competitiveness of the sector.⁴³ Europe has one of the highest numbers of cultural and heritage sites, and many of which are located across the Atlantic coast.

⁴¹ Eurostat

⁴² Ratio of nights spent in hotels and similar establishments relative to the total permanent resident population of the area.

⁴³ Blue Growth: sustainable growth from the oceans, seas and coasts: Summary Report of the Online Public Consultation Results, http://ec.europa.eu/dgs/maritimeaffairs_fisheries/consultations/blue_growth/blue-growth-consultation-report_en.pdf

4.2.2 Innovative, alternative, and sustainable tourism activities need to be developed in the Atlantic to respond to the needs of the environment and discerning tourists

In Europe, Biodiversity is deteriorating: 25% of marine mammals, 15% of terrestrial mammals and 12% of birds are threatened with extinction⁴⁴. Moreover, 62% of European habitats and 52% of European protected species included in the "Habitat" Directive have an unfavourable conservation status⁴⁵.

An increasing demand for eco-tourism at EU level

Seasonality and sustainability threats (including a growing carbon footprint, water scarcity and pressure on natural resources and habitats) were identified as the main challenges ahead for maritime and coastal tourism in Europe according to the participants in a public consultation on tourism in the EU⁴⁶ (54% and 42,9% of the participants, respectively, ranked these challenge as "very important"). The need to ensure the sustainability of the sector was a clear priority for the survey' participants: 98.4% of the respondents prioritised the need for a strategy which protects the physical and natural environment of coastal regions by supporting sustainable economic and social measures whilst mitigating adverse impacts.

Eco-tourism as an innovative and sustainable approach to tourism in the Atlantic

There is a strong need for cooperation of all players in coastal areas in order to develop more sustainable tourism, which takes into account fauna, flora and tourists demands. This started a strong trend in the beginning of the 2000s towards the promotion of eco-tourism as a sustainable solution for tourism. Although the concept of eco-tourism is difficult to define, it does, however, have some consistent features:

- ▶ The destination itself is usually an unpolluted natural area.
- ▶ Its attractions are the flora and fauna, and its entire bio-diversity.
- ▶ Eco-tourism should support the local economy and its indigenous atmosphere.
- ▶ It should contribute to the preservation of the environment, and promote the importance of conserving nature.
- ▶ 'Eco-trips' often include a learning experience.

As this is a relatively new concept in Europe, it is challenging to establish the size of the market in the Atlantic. The Atlantic is privileged compared to the rest of Continental Europe in terms of marine wildlife, especially if the outermost regions are taken into consideration, as the Azores have their own ecosystem. With the instauration of the Natura 2000 network, many wildlife and maritime reserves have been set up along the coast, allowing the development of such activities as whale watching and bird watching.

Some examples of projects

A good project must not be isolated in its application: it needs to be a catalyst for other innovative projects that allow the promotion of the coastal communities and can possibly be copied elsewhere. This is the case of the Wales Coastal Path, presented below.

Case Study: Wales Coastal Path

a) A model for ecotourism

Wales Coastal Path as innovative approach to coastal tourism. Wales is the first country in the world to provide a dedicated footpath along its entire coastline. The Wales Coast Path is the longest continuous coastal path around in the UK. It opened on 5 May 2012 – although many parts

⁴⁴ EEA, 2010

⁴⁵ EEA-ETC/BD, 2009

⁴⁶ Report on the Public consultation on tourism in the European Union

already had established paths, such as the North Wales Path, the Anglesey Coastal Path and the Llŷn Coastal Path – the Pembrokeshire Coast Path has been a designated National Trail.

b) An experience well adapted to a digital society and education

- The official path website is meant to enrich the tourist “path experience”: on top of presenting all the needed information about the path, it gives plenty of information on the specificities of the Welsh coast and country in general.
- Many innovative projects have been created in relation to the path: Geovation organised a challenge to promote the development of innovative projects based on the path, to create social, economical and environmental benefits.

But tourism has also the potential to create beneficial effects on the environment by contributing to environmental protection and conservation. The NEA 2 project is an example of regional efforts in this field (see case study below). It is also a way to raise awareness of environmental values and it can serve as a tool to finance protection of natural areas as Marine Protected Areas (MPAs), and increase their overall economic importance.

Case Study: Nautisme Espace Atlantique II

NEA 2 was a project involving 23 partners in 8 regions on the European Atlantic coast. Together, they engaged in actions designed to ensure the sustainable development of marine leisure in the Atlantic Area. The project ran from 2009 to 2011.

The aim was the sustainable development of the marine leisure and watersports industry in the Atlantic Area. All partners worked together and within their own regions to: appraise the current situation in the marine leisure industry; extract and share best practice; work with marine leisure businesses and service providers to improve their environmental/energy/social equity status; support innovation; assess skills needs of businesses in the sector and develop and deliver training; support participation at marine leisure/watersports industry events, exchanges and conferences; and market the sector to the world.

17 actions, in 4 categories, were implemented by the partnership as both common and local actions:

5 Actions “Marine leisure and the economy”

5 Actions “Marine leisure and the environment”

4 Actions “Marine leisure and social inclusion”

3 Transversal Actions, for example development and promotion of the Atlantic Watersports Games.

4.2.3 Developing cruise tourism in novel locations can assist in growing the currently under-exploited sector in the Atlantic

Cruise tourism is a strong industry in Europe. In 2009, over 4.9 million European residents booked cruises, a 12.1 % increase on figures from 2008, representing nearly 29% of all cruise passengers worldwide⁴⁷. More than 4.8 million passengers embarked on cruises from a European port, a 3.2% increase compared to 2008, with over 75% of these being European nationals. The vast majority of these cruises visited ports in the Mediterranean, the Baltic and other European regions, generating 23.8 million passenger visits at European port cities, a 9.4% increase on figures from 2008. This represents a value of €14.1 billion in direct spending by cruise lines and their passengers and crew, €34.1 billion in total output, 296,288 jobs, and €9 billion in employee compensation.

The dominance of the Mediterranean Sea basin, whilst even apparent for all maritime passenger transport, is even more remarkable when limited to cruise passengers, accounting for approximately two thirds (66.5 %) of all

⁴⁷ THE CRUISE INDUSTRY, A 34 Billion Partner in Europe’s Economic Growth, European Cruise Council, 2010

cruise passengers in the EU.⁴⁸ The North-East Atlantic Ocean also has a larger share of cruise passengers (13.8 % compared with 11.8 % for all maritime passengers)⁴⁹. However the Atlantic and grown at the slowest rate of all European basins between 2007 and 2010 – at only 11.1% compared to 74% in the North Sea and 27.4% in the Baltic Sea. The size of the market in the Atlantic compared to the other European basins is illustrated below.

Figure 7: Cruise passengers in the EU, by basin (2010)

	Cruise passengers, 2010 (1 000)	Change in the number of cruise passengers, 2007–10 (%)	Coastal region (NUTS 3 regions) with the highest number of cruise passengers, 2010
EU-27	10 530	39.4	Barcelona (ES511)
Coastal regions:			
EU-27 coastal regions	9 043	20.0	Barcelona (ES511)
North Sea	659	74.3	Hamburg (DE600)
Black Sea	1	-	Varna (BG331)
Mediterranean Sea	6 010	22.9	Barcelona (ES511)
Baltic Sea	924	27.4	Byen København (DK011)
North-East Atlantic Ocean	1 244	11.1	Southampton (UKJ32)
Outermost regions	205	-51.4	Tenerife (ES709)

(*) Excluding Estonia, Latvia, Lithuania, the Netherlands and Portugal; EU-27, data for 2009 and growth rates for 2007–09; EU-27 coastal regions, latest period calculated using the information available for each Member State (either 2009 or 2010), with the growth rate (2007–10) also based on this aggregate.
Source: Eurostat (online data code: mar_pa_aa)

The European cruise market has grown by 23% from 2007 to 2009 and has more than doubled from 1999 to 2009, although the North-East Atlantic is yet to profit from that trend, since most cruise locations are in the Mediterranean. This said, the trends have been changing for the past five years, due to both conjecture and structural changes, which may lead to new potential opportunities for the sector.

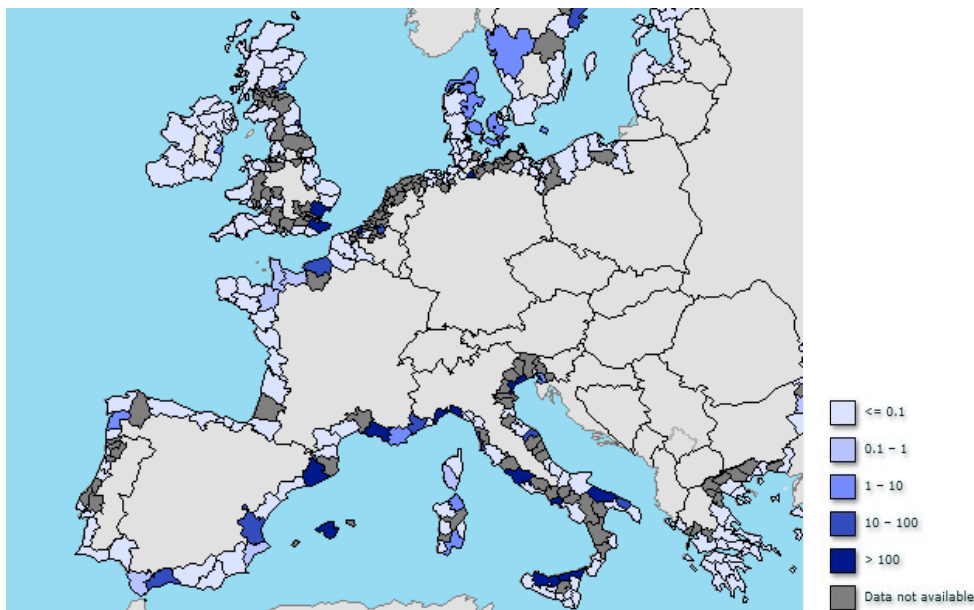
Increased pressure for CO2 cuts and fuel costs are expected to reshape the sector, as it is likely that in the long term distant short trips will decrease and local areas will become more attractive tourism destinations again, particularly for those who can no longer afford distant journeys. Fierce competition amongst regions and coastal communities within and outside the EU is expected.

The vast majority of cruise port calls in Europe are at the Mediterranean and Baltic ports. The top ten destination countries accounted for 86% of cruise passenger visits in 2009. The top four are in the Mediterranean and accounted for two-thirds of all European passenger visits. As can be seen on figure 9 below, the number of cruise passengers on the Atlantic is relatively small compared to the Baltic coast and more importantly the Mediterranean coast.

⁴⁸ Eurostat, http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-HA-12-001/EN/KS-HA-12-001-EN.PDF

⁴⁹ Eurostat, http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-HA-12-001/EN/KS-HA-12-001-EN.PDF

Figure 8: Cruise passengers in EU coastal regions, by NUTS 3 regions, 2010 (1000 persons), source Eurostat



The UK is the largest source market for cruise passengers in Europe with over 1.5 million residents taking cruises during 2009. It was also the second largest market in terms of cruise industry direct spending with €2.4 billion, a 6.4% increase over 2008.⁵⁰

One barrier to developing new cruise locations might therefore be an absence of appropriated infrastructure. Cruise lines seek destinations that add value to their holiday product. They want ports that customers recognise and make the cruise easier to market, thus providing additional value.

Furthermore, there is a need for close collaboration between the Atlantic Member States to develop the business potential in the region. The North East Atlantic is a good example of where close cooperation has played a key role in developing cruise tourism. For example, in 2008 the Nordic Atlantic Cooperation (NORA) hosted a conference in Copenhagen to discuss the present and future opportunities and challenges within cruise tourism. There is also potential benefit in linking cruise tourism with eco-tourism, since a focus on the environment is increasingly important for the reputation of cruise operators.

4.2.4 Innovation in tourism experiences and value for money are important in the current climate

A growing demand for unique experiences and value-for-money should shape parts of the sector. The mix of increased air transport prices and stagnant average income of EU citizens might reshape the current EU tourism demand towards better value-for-money. Competition will come from both EU and worldwide destinations, which have greater quality in terms of the local environment, infrastructures and services, and/or lower labour costs. They will adversely impact areas that do not have specific unique selling points and are poorly connected to the main urban centres.

The future of coastal tourism will be shaped by the income potential of certain EU client groups, e.g. 35% of European tourists have changed behaviour due to the crisis.⁵¹ An ageing population and a larger share of educated citizens will lead to more demand for 'customised experiences'. Climate change exposes many coastal regions to sea-level rise and/or changing weather conditions. Increasing fuel prices will challenge existing transport models (e.g. low-cost airlines).

⁵⁰ THE CRUISE INDUSTRY, a 34 Billion Partner in Europe's Economic Growth, European Cruise Council, 2010

⁵¹ Blue Growth, Final Report, Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coasts, 13 August 2012

Innovative and new alternative tourism activities can create growth and employment through diversification

There are many options to develop new tourism activities, whether coastal or marine. Marine tourism, including angling, whale watching, leisure boating, yachting and surfing, scuba-diving and other holiday activities by the sea and more recently cruise liner holidays, is a very significant component of the global and European marine economy and was valued at over €72 billion in 2004. Marine leisure and tourism has very different aspects depending on the actual location in the Atlantic Area (e.g. from activity holidays in the north to sun holidays in the south). Marine leisure is increasingly a critical component of human health, leisure and wellbeing (the “blue gym”). Marine leisure and tourism is a rapidly growing sector, in spite of the economic recession, and is of great importance to coastal communities.

In the North East Atlantic basin, surfing can be seen as a viable activity to develop, given the natural conditions that already exist, and the relatively low environmental impact of surfing. In order to ensure the consistency of conditions and therefore extend the tourism season, artificial reefs can be seen as an innovative solution. This can increase sustainable coastal tourism through surf and diving revenues, as they can protect marine species and therefore also create potential dive and game fishing sites. An important niche is represented by nautical sports. For example, 10 million people in the world travel each year to wind and wave surfing destinations and the trend is growing, and 500 thousand more people every year practice this sport. Although no precise data are available for the EU, the phenomenon is becoming increasingly relevant, particularly for Portugal, Spain, France and the UK.⁵² A practical example is the Boscombe reef, explained below.

Case Study: the Boscombe reef

An artificial reef in Boscombe, Bournemouth, UK, was developed in November 2009. The multi-purpose reef was expected to create waves up to 30% larger and double the number of surfing days annually. Construction on this reef began in June 2008, and was completed in August 2009. The reef was built from large sand-filled textile containers, totalling 13,000 cubic meters. It was designed purely as a surfing break.

In Boscombe, prior to the reef, it was estimated that there were 77 good surfing days, although surfing took place on 153 days, with a total of 5,000 surf visits to Boscombe per year. The intention was that the reef would double the number of good surfing days and it was hoped this would generate 10,000 visits. The original estimate for designing and building the reef was £1.4 million. The eventual cost was £3 million for the reef and a total of £11 million for the redevelopment of the seafront area and the refurbishment of the pier.

Culture, sport and heritage need to be valorised to boost tourism & provide growth and employment in Atlantic coastal communities

Thanks to new digital communication possibilities, there are many initiatives to use cultural and heritage as beacons of tourism, bearing in mind the pressure that a higher number of tourists can put on them, e.g. organising sports events to draw attention to a region and/ or a new tourism activity. One result of the NEA 2 project (see box above) was the organisation of the Atlantic Area Watersports Games that will take place in 2013 in Portugal. These games are capitalizing on previous regional watersports games, like the Celtic Watersports Festival.

This is in line with the findings of the public consultation on tourism in the EU: the importance of the development of tourism based on non-beach related activities which can fight seasonality in tourism, with events that can easily be hosted by the cities thanks to existing infrastructures. There is a need to emphasise the strengths (such as Europe's diverse coastal landscapes and its rich cultural heritage). The threat to such events could be a relatively weak transport connectivity and accessibility.

The EU tourism policy is focused on promoting competitiveness and sustainability. Various Community policies and measures assist the tourism industry and European destinations in responding to challenges.

⁵² Blue Growth, Final Report, Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coasts, 13 August 2012

For instance, the European Union has launched the “50.000 Tourists” Initiative⁵³ to combat seasonality and encourage tourism during low season. The pilot phase of the project aims to encourage 25,000 South Americans to travel to Europe between October 2012 and March 2013, and 25,000 Europeans to travel to South America between May and October 2013. Other initiatives launched by the Commission included the “European Destinations of Excellence (EDEN)” and a Virtual Tourism observatory. These initiatives are not directly focused on coastal tourism, though the theme for the excellence in 2010 was “aquatic tourism”: it was addressed to tourist coastal, lake and riverside destinations promoting innovative approaches for their aquatic tourism offer in such a way as to develop a more qualitative environment, to cope with the seasonality issue and to rebalance the tourist flows from the most famous and crowded tourist destinations. Among the 25 destinations named as winners, only 3 are located on the North-East Atlantic coast.

Furthermore, Galway has positioned itself as a location for international marine sports events. The 2009 Volvo Ocean Race stopover in Galway, which lasted two weeks, provides an interesting example of economic return and location branding generated through integrated sports events. In addition, the Irish national Tourism Development Authority (Failte Ireland) aims at expanding the growing market for adventure holidays in the future, particularly alongside its Atlantic shores. This relates to targeted investments in infrastructure, business support and promotion of active engagement and authentic adventure experience.

Marine culture and heritage represent significant potential for coastal communities and new interactive ICT technologies are opening up new vistas in this area. A more recent development has been the European cruise line industry. This industry generated €29 billion in total economic benefits for Europe in 2007. Significant potential exists to develop innovative cruise packages along the Atlantic coast.

Figure 9: World heritage sites in Europe, UNESCO, 2014, source: <http://whc.unesco.org/fr/cartemurale>



⁵³ EDEN is the acronym for European Destinations of Excellence, a project promoting sustainable tourism development models across the European Union. The project is based on national competitions that take place every year and result in the selection of a tourist “destination of excellence” for each participating country. The 2010 theme for EDEN was Aquatic Tourism

4.3 Challenges and gaps

More than a third of the value of the maritime sector in the North-East Atlantic is generated by coastal tourism and shipping, with tourism and the fishing industry being the largest employers.⁵⁴ Future opportunities for the Blue Economy are significant, and Atlantic Member States are in a good position to make the most of these growth opportunities.

However there are a number of barriers, gaps and challenges that need to be addressed in order to realise Blue Growth. A number of these are introduced below:

- ▶ The need for Atlantic stakeholders to strive for increased innovation in the field of innovation: there is a relative lack of innovation on the North-East Atlantic as compared to the rest of Europe - the 2010 EDEN⁵⁵ illustrates this. There is a strong need to make stakeholders aware of the importance of innovation.
- ▶ The availability of financing: although there are many European programs available, the availability of financing for SMEs to develop innovation is considered as scarce. The Axis 4 of the European Fisheries Fund is one example where local action groups and SMEs can be funded to undertake innovative projects. This type of financing needs to be scaled up at an Atlantic regional level.
- ▶ The relative underdevelopment of the cruise industry on the North-Atlantic Coast is a weakness, but can be seen as an opportunity. Lessons may be learned from the Nordic Atlantic Cooperation (NORA) initiative, in order to encourage stronger cooperation and coordination in developing the sector regionally.
- ▶ There is still not enough data on the environmental impact increased tourism may have, and there is therefore no clear direction to develop ecotourism. Further study into environment impacts and benefits could be undertaken and freely accessible for Atlantic region stakeholders, in order to improve opportunities to develop alternative and sustainable tourism.
- ▶ Though tourism is a strong factor of job creation, the jobs created may not necessarily be skilled and therefore do not encourage people to develop their skills. Strong intervention is needed from local government and maritime clusters to assist in skill development and talent retention for coastal communities.

4.4 Potential areas for future action

This section addresses potential areas for future action resulting from a desktop review prior to the workshop. The objective of this list was to encourage workshop discussions.

4.4.1 Research priorities

- ▶ Methodologies to assess the environmental impact of tourism on natural resources
- ▶ Research on social innovation to fight against the seasonality of tourism related employment
- ▶ Research on economic innovation to finance development projects

4.4.2 Investment priorities

- ▶ Innovative new activities to emphasise the natural diversity of Europe
- ▶ Port infrastructure to develop cruise tourism in Europe
- ▶ Increased transport connectivity between coastal regions and accessibility

⁵⁴ Blue Growth, Final Report, Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coasts, 13 August 2012

⁵⁵ European Destinations of Excellence

5 Subtheme 2 – Sustainable Growth: the role of the seafood sector

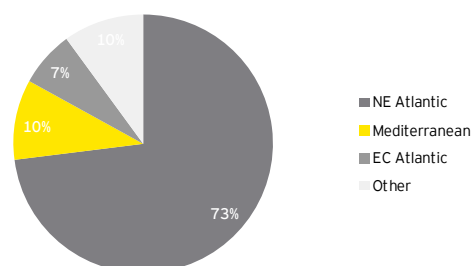
Sustainable growth is the key ingredient of achieving Blue Growth and the Atlantic Strategy⁵⁶ and one of the Europe 2020 priorities⁵⁷. According to the Commission, sustainable growth means, building a more competitive low-carbon economy, capitalising on Europe's leadership in developing new green technologies and production methods, harnessing EU-scale networks to give businesses an additional competitive advantage and improving the business environment. As many communities on the Atlantic coast are dealing with the challenge of economic restructuring following the general decline of the traditional fishing industry in Europe, fostering new and innovative economic opportunities for the next generation is vital to ensure the future of coastal communities.

5.1 Context, baseline and trends

The Atlantic region is rich in fisheries but faces a number of challenges that must be addressed collectively

The Atlantic is one of the richest ocean regions in the world, but also one of the most heavily used, with over 74% of EU-27 Member State catches taken from the Atlantic in 2007⁵⁸. The term 'Atlantic' employed here refers to the European part of the Atlantic (areas 2, 3 and 4 of the OSPAR convention).⁵⁹ The region is dominated by deep ocean basins, except for the Celtic Sea, the shelf along the Bay of Biscay and the Iberian coast. Biodiversity in the area is high; however, several species are endangered, largely due to a lack of sustainable fisheries management. The largest threats to marine habitats and biodiversity in the region are: a lack of sustainable fisheries management, unsustainable fishing practices such as overfishing, bottom trawling, discards, catch of non targeted species, pollution from maritime transport through oil spills and tributyltin (TBT) in antifouling paints. Finally, there is a general lack of information and monitoring on species, habitats and fish stocks in the Northeast Atlantic Ocean with the exception of coastal waters.

Figure 10: Total annual catch by region in 2007
source: EUROSTAT



The declining seafood sector poses as a particular challenge for dependent coastal regions

The seafood sector in Europe has been in general decline over the past decade, with a shrinking resource base at home and increasing competition from abroad. North-East Atlantic fisheries peaked at 13 million tonnes in 1976 and have since fallen to around 10 million tonnes a year⁶⁰ with many of the traditional fish stocks in the Atlantic are fully exploited, overexploited or depleted. According to the European Environmental Agency, of the 50 assessed fish species in the Atlantic region, only half are currently exploited at a level delivering maximum long-term yield while 19 are considered overexploited and ten considered to be outside Safe Biological Limits (SBL). Furthermore international competition has been undercutting Europe's production costs and flooding the domestic

⁵⁶ COM (2011) 782 Final

⁵⁷ COM(2010) 2020 final

⁵⁸ Eurostat Fisheries Statistics

⁵⁹ OSPAR (The Convention for the Protection of the Marine Environment of the North-East Atlantic). Areas 2, 3 and 4 cover the Great North Sea, Celtic Sea, Bay of Biscay and Iberian Coast. Regions 1 and 5 refer to the Arctic waters and wider Northeastern Atlantic respectively.

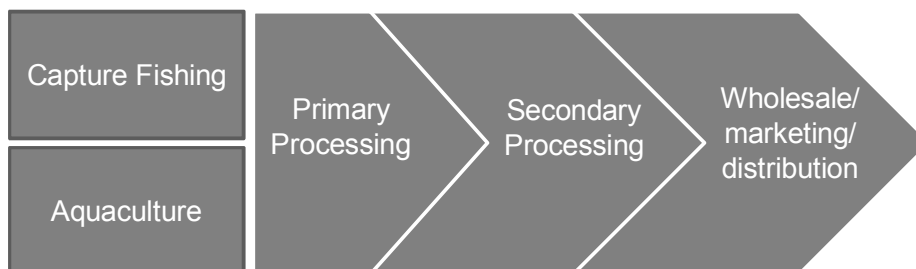
⁶⁰ FAO

market with cheap imports. The EU is currently the fourth largest producer (catches and aquaculture) with an annual volume of 6,3 million tonnes of live weight, far behind China's 49,7⁶¹.

Because of the geographic distribution of seafood industry activities, the effects of structural changes in the industry have been highly concentrated in coastal regions, where the sector can sometimes account for as much as half of all economic activity. The reliance on maritime activity and relative lack of alternative economic opportunities is forcing these areas address these challenges through identifying innovative and sustainable new growth potential within the seafood sector.

The seafood sector, as defined by the FAO, includes recreational, subsistence and commercial fishing, as well as the harvesting, processing and marketing sectors. Nonetheless, the seafood sector normally refers to the commercial sector of the seafood industry, which includes individuals or enterprises associated with wild-catch or aquaculture and the various downstream industries that transform resources into products for consumption. Making this distinction excludes the traditional and recreational fishing sectors, however, tangential sectors such as tourism and recreational fishing cannot be left out of the equation, with Atlantic coastal communities struggling to diversify economic activity. Furthermore, upstream of the value chain of core activities are industries such as shipbuilding and equipment supplies and important downstream industries include retailers and the transport industry.

Figure 11: Generic Seafood Sector Value Chain



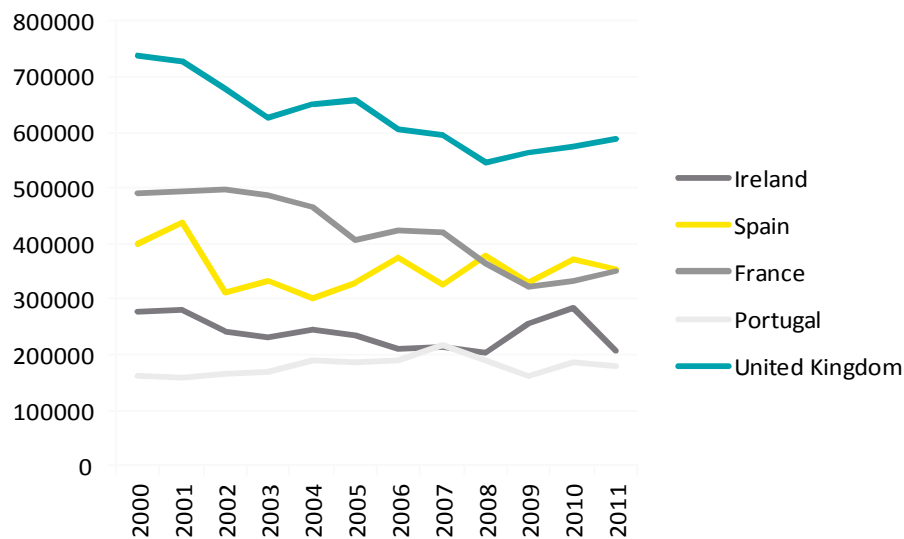
Member States in the Atlantic region (Denmark, Spain, France and the UK) accounted for 56% of total EU catch in 2007 and, as mentioned, the Atlantic represented over 74% of total catches in the EU-27⁶². After Norway, Iceland and Denmark, the five Atlantic coast Member States are the most important in the region. However, the annual catch, in line with the EU average, has been steadily declining and aquaculture production remains stagnant, despite its strategic importance in closing the deficit in seafood products. Driving this decline is the shrinking resource base in the region, with half of stocks in the Atlantic Ocean believed to be exploited at unhealthy levels. Concomitant with declining annual catch, the sector has been shrinking, with employment in the sector shrinking by 31% since 2002 across Europe⁶³.

⁶¹ Facts and figures on the Common Fisheries Policy 2012. European Commission

⁶² Eurostat Fisheries Statistics

⁶³ European Commission (2011) Staff Working paper: Impact Assessment Accompanying Commission proposal for a Regulation of the European Parliament and of the Council on the Common Fisheries Policy (SEC(2011)891), quoted in http://assets.ocean2012.eu/publication_documents/documents/173/original/overcapacity-briefing.pdf

Figure 12: Annual catch (2000 – 2011) in the Northeast Atlantic region (tonnes) source: Eurostat



While the seafood industry may represent only a small part of the total European economy, it can make up important contributions to local economic activity as they, by their very nature, are heavily concentrated in coastal regions. In some areas of Scotland, the fisheries industry can provide up to 23% of jobs and has strong links with other sectors, such as broader maritime activity and tourism, which can account for the majority of economic output⁶⁴. With high levels of concentration of one activity come the inherent risks associated with eventual decline of a particular industry. The Atlantic region thus finds itself in a difficult position, having to adapt traditional industries to new realities in order to ensure that traditional livelihoods can thrive in tomorrow's economy and, at the same time, seek out diverse new opportunities that can provide sustainable growth sources.

Demand for seafood from Atlantic Member States is increasing, requiring innovative approaches

Fish consumption in the EU currently stands at 13 million tons per year, or, almost 20kg per person per year and trends are likely to continue to increase in the future⁶⁵. The patterns of consumption are also changing, with increasing demand for frozen and processed fish. The European market is far from homogenous, with France, Spain, Italy, Germany, UK and Portugal accounting for 85% of expenditure on fish⁶⁶. Thus, while average annual consumption in Northern Europe can be well beyond the average, in Eastern and Central Europe, it can vary between 3 and 16 kg per year. European production cannot keep pace with domestic demand, making it the largest market in the world for imported seafood and resulting in a trade deficit in processed fish products of around 3 billion Euros (almost half being salmon). Exports from the EU totalled only 100,000 tonnes in 2008 and included mainly high-value processed products⁶⁷.

Reconciling the growing demand for seafood with reducing fish stocks, overcapacity in Europe's fishing fleet and unsustainable harvesting practices, while creating new economic opportunities within the seafood sector will require innovative approaches, through aquaculture, sustainable fishing practices and measures to prevent invasive species in order to protect Europe's coastal populations for generations to come. Furthermore, efforts to diversify economic activity beyond the broad confines of the seafood sector, such as through promoting gastro-tourism and working with local administrations to help grow local markets in order to help the seafood sector to evolve as a sustainable source of high-value added jobs, are also key developments required.

⁶⁴ 2012 UK National Strategic Plan for the European Fisheries Fund

⁶⁵ 'Fish Dependence – 2012 Update' http://www.neweconomics.org/sites/neweconomics.org/files/Fish_dependence_2012.pdf

⁶⁶ FAO 2010 Regional Review: Europe

http://www.seafish.org/media/Publications/SeafishSummary_FAOAquacultureEurope2010_201112.pdf

⁶⁷ *Idem*

Demographic and economic evolutions will require restructuring and diversification of economic activities

Within this context of general economic decline, often accompanied by demographic evolutions such as ageing of and depopulation, economic diversification is one of the main challenges facing coastal communities in the Atlantic region. Diversifying local economic activity can help ease the pressures of the restructuring of the fishing industry, by providing opportunities that ease economic and social transitions and generate employment for the next generation.

Within this context, diversification can refer to two ideas; diversification within the fishing sector, including the development of new techniques, products, business models and markets and the broader diversification of coastal areas into sectors that are either not at all or loosely related to fishing. This spectrum can also include intermediary diversification outcomes, such as the development of complementary income streams from related or unrelated sectors for people remaining in the fishing sector (marketing fishing byproducts, fishing tourism etc).

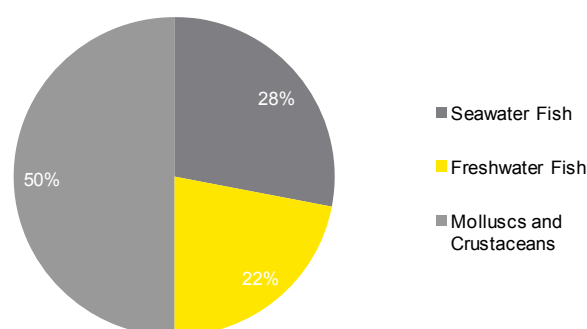
Economic diversification is a key element of sustainable growth. Dependency on one single activity poses many threats for communities. Thus, diversity helps communities hedge risks and invest in future growth industries. While European and Member State level action can provide valuable strategic reference and mobilise resources, local governments will play an essential role in this process. Local government is well placed to understand the needs of their respective communities and most efficiently allocate limited resources.

Given the challenges, and need for innovation and economic diversification, the following section presents key enablers of Blue Growth: aquaculture, sustainable fisheries, gastro-tourism and prevention of invasive species.

5.1.1 Aquaculture industry has the potential to close the deficit in seafood products, but presents a number of challenges to be addressed collectively

Aquaculture is the farming (cultivation under controlled conditions) of aquatic organisms, such as fish, molluscs, crustaceans and aquatic plants. Aquaculture can be conducted in freshwater onshore, in coastal waters and offshore. Since the 1970s, aquaculture production has increasingly outpaced wild capture, with an average annual growth rate of 7.9% per annum worldwide.⁶⁸ In 2010, total aquaculture production in the EU was just less than 1.3 million tons, worth around € 3.2 billion, employing around 80,000 people.⁶⁹ In the Atlantic region, aquaculture production is concentrated in France and Spain. 28% of production is marine fish, mainly salmon followed by sea bass and sea bream in the UK and Ireland, while about 50% of the production is shellfish (mainly mussels and oysters), concentrated in France (oysters), Spain, the Netherlands and the UK (mussels). Finally, 22% is freshwater fish.⁷⁰

Figure 13: Aquaculture production in Europe, source; facts and figures on the CFP



Many policy makers believe that aquaculture has the potential to help close the deficit in seafood products. With steadily declining annual catches and the rise of consumption in Europe, the EU has become the largest import

⁶⁸ FAO 'State of World Aquaculture' <http://www.fao.org/fishery/topic/13540/en>

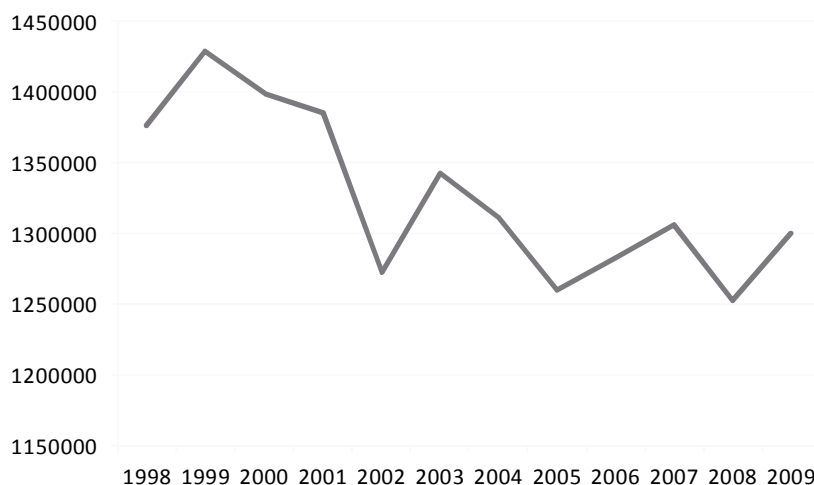
⁶⁹ FAO 2010 Regional Review: Europe

http://www.seafish.org/media/Publications/SeafishSummary_FAOAquacultureEurope2010_201112.pdf

⁷⁰ *Idem*

market for fish products and is increasingly relying on foreign imports to satisfy demand. Despite its strategic relevance and sustained growth worldwide, aquaculture production in Europe has stagnated over the past decade. Most of the growth since 1990 can be attributed to marine finfish aquaculture (salmonids, sea bass, sea bream and common carp and higher-value fish species, such as turbot and tuna), while freshwater aquaculture and, to a lesser extent, mollusc aquaculture has been in decline.⁷¹

Figure 14: Annual aquaculture production in Europe (1998 – 2009), *Source : Ernst & Young/Eurostat*



With the opportunities for growth in this sector also come a host of challenges that must be addressed as production is further scaled up

These challenges include:

- ▶ Large-scale aquaculture can produce considerable environmental pressures, particularly through the discharge of nutrients, organic matter, micro-bacterial pathogens, drugs, herbicides and fungicides. Non-native species can also cause disequilibrium in ecosystems when non-native organisms ‘escape’. These challenges depend on the scale of operations, techniques employed and local environmental dynamics.
- ▶ Environmental legislation and national regulatory frameworks are considered to be a burden. In some Member States, required licenses can take over a year to obtain.
- ▶ The aquaculture industry benefits from a highly developed research infrastructure; however research in this domain is often highly fragmented between public and private institutes, universities and private companies, with considerable overlaps in research and dissemination.
- ▶ Offshore aquaculture is a relative ‘latecomer’, and its claim on marine space remains to be established. Intense competition for space in coastal areas is pushing aquaculture further offshore in order to find suitable conditions, which in turn is driving up costs.
- ▶ Increasing international seafood competition, particularly from South East Asia.
- ▶ Industry fragmentation can pose constraints on sustainable growth by making it more difficult to access capital (More than 90% of the businesses in the European aquaculture sector are SMEs).

The first European strategy for aquaculture development was developed in 2002. Five years later, in 2007, the European Commission reviewed the status and impact of that strategy and launched an extensive consultation with stakeholders that then led to a new communication “Building a sustainable future for aquaculture; A new impetus for the Strategy for the Sustainable Development of European Aquaculture”.⁷² This new communication aimed to address some of the key obstacles to growth faced by the industry. Its objectives include:

- ▶ Promoting competitiveness

⁷¹ FAO 2010 Regional Review: Europe

http://www.seafish.org/media/Publications/SeafishSummary_FAOAquacultureEurope2010_201112.pdf

⁷² (COM (2009) 162 final)

- ▶ Increased Research and Development
- ▶ Improving environmental and economic sustainability
- ▶ Improving governance and image

Aquaculture: from stagnation to future growth potential

Aquaculture can be considered a growth stage industry, and it accounts for approximately 25% of marine and fresh water aquatic production.⁷³ The shrinking natural stock of fish means that Europe's future demands will increasingly need to be met by aquaculture production, particularly if consumer demand for locally produced organic products continues to grow.

However, the aquaculture sector has been relatively stagnant over the past decade. Some experts believe that the most significant growth potential for the aquaculture sector lies in expanding algae production, which currently represents a very small portion of aquaculture in Europe. Commercial uses for algae include metabolites and primary compounds for the feed processing industry, cosmetics, green chemistry and energy. Many of the future uses for algae production are still in embryonic stages of research and development, meaning the necessary demand has not yet materialised to render algae aquaculture commercially viable on a large scale.

The future of growth in the aquaculture sector will also depend on the ability of the sector to reinforce sustainability, particularly through the pursuit of organic aquaculture. The European aquaculture industry cannot compete in terms of cost with much cheaper imports with high costs for key inputs and strict environmental regulations, however, evolving consumer demands within Europe mean that there is a growing and highly profitable niche for locally grown, organic seafood produce. European consumers are increasingly conscious of the environmental impact of food production and safety concerns linked to non-organic techniques used in food production. The aquaculture industry is well placed to tap into this increasingly lucrative market.

Finally, the development of cost-effective and environmentally sound techniques for offshore aquaculture production will determine Europe's ability to further develop a commercially viable aquaculture industry. With coastal waters becoming more and more crowded for marine space, aquaculture producers are being pushed further offshore to find suitable sites. This move entails a whole new set of difficulties that need to be better understood and poses important environmental and legal questions that need to be conjointly addressed by Member States.

The following case studies present examples of multi-stakeholder, regional cooperation projects aimed at promoting the expansion of sustainable aquaculture and a platform for discussion and sharing of information regarding the development of offshore aquaculture.

Case Study: Regional effort for sustainable aquaculture - SEAFARE⁷⁴

SEAFARE is a multinational Atlantic area initiative bringing together France, Spain, Portugal, UK and Ireland and financed by the European Regional Development Fund through the Atlantic Area Transnational Program. It has brought together applied R&D centres, aquaculture industry organisations and environmental agencies across the region, in an effort to promote the sustainable expansion of European aquaculture. SEAFARE aims to develop solutions to specific constraints on industry development for Europe's fish and shellfish farmers, in particular, through species diversification and development of low-intensity aquaculture systems that are compatible with sensitive coastal habitats. The initiative seeks to provide models for profitable expansion of the aquaculture sector that can be integrated with sustainable management of coastal ecosystems. The partnership hoped to bridge the knowledge gap in order to facilitate rapid and effective capitalisation of project results as tangible and sustainable examples of good practice to inform sustainable industrial expansion, environmental management and policy development.

⁷³ Blue Growth, Scenarios and Drivers for Sustainable Growth from the Oceans, Seas and Coasts (DG MARE 2012)

⁷⁴ SEAFARE project, <http://www.seafareproject.eu/>

Case Study: Irish Institute helps identify challenges of offshore aquaculture⁷⁵

One of the most often cited challenges facing the development of the aquaculture industry in Europe is the lack of suitable sites. To address this obstacle, aquaculture sites have been moving further offshore. This move into a more challenging environment creates a whole new set of difficulties that must be addressed. OATP, represents a steps towards creating a centrally coordinated technology platform, with the vocation of sharing best practices and technical developments.

OATP was an ambitious project led by the Marine Institute in Ireland and cofinanced under FP6 which collected collated and validated data and opinions from a diverse range of sources on the opportunities and requirements of offshore aquaculture in Europe. It aimed to develop an up-to-date offshore aquaculture profile across the EU, draft a common vision of offshore aquaculture, and the role of research, technology, development and innovation (RTDI) for the EU, carry out a gap analysis to identify areas of strength and weakness, identify the role of a technology platform to increase synergies, add value and boost competitiveness for EU offshore aquaculture.

OATP-industry collaboration presented the Commission with an overview of RTDI priorities for promoting the sector and provided information on the investment necessary if aquaculture were to continue its expansion through the offshore option through identifying the strengths and weaknesses of the European sector in a worldwide context and regional opportunities for economic development and help raise standards across the EU.

Because of unique topographical features off Irelands coasts (because or Ireland's gently sloping continental shelf, sheltered inshore waters are too shallow for finfish cage farming), Ireland has emerged as a world leader for open ocean aquaculture production, uniquely placing the Marine Institute to undertake this project.

The main findings of the report include;

- ▶ Environmental issues are considered a challenge, although moving offshore would mitigate many environmental concerns associated with coastal aquaculture;
- ▶ Considerable technological developments are needed, in particular, containment systems such as cages, moorings and fishnets, suitable boats to access and service offshore locations, remote environmental monitoring (and communication in real time) of fish behaviour, mortality management and harvesting techniques;
- ▶ Unclear legislative context for offshore aquaculture development needs to be clarified;
- ▶ A much more substantial research budget is needed to, for example, research better adapted species for offshore aquaculture;
- ▶ Considerable capital investment is required to mount operations;
- ▶ Need for better and more integrated spatial planning policies.

Aquaculture trends summarised...

- ▶ In general, EU aquaculture has been stagnating over the past decade.
- ▶ Finfish marine aquaculture can account for most of the growth, while many experts believe algae aquaculture will play an increasingly important role in future growth
- ▶ The Atlantic region Member States have the highest level of aquaculture production, although growth can be cited in other Member States such as Greece and Italy.
- ▶ Policy makers have identified aquaculture as a potential means of closing the 'seafood deficit', meaning there is considerable political will for the aquaculture industry to develop.
- ▶ A series of challenges has been identified for the aquaculture industry in the Atlantic region and in Europe in general;
 - Heavy international competition, with prices depressed by low-cost production, particularly in South East Asia
 - High level of bureaucratic 'red tape'

⁷⁵ http://ec.europa.eu/research/fp6/ssp/oatp_en.htm

- Dominance of SMEs among aquaculture firms leads to high sensitivity to financial risks, insufficient commercial infrastructure (low capital, small-scale organisation, marketing & sales, lack of collateral for loans) for investments in large-scale production and R&D and reluctance of investors. This is a particular challenge for the development of offshore aquaculture
- Credit crisis makes banks even more cautious to provide loans
- High levels of fragmentation in the area of aquaculture research
- Intense competition for space is pushing aquaculture production further offshore, where cultivation is more challenging and currently more costly
- The environmental ramifications of intensive aquaculture production are not fully understood
- Aquaculture could face political problems, such as public acceptance

5.1.2 Sustainable fisheries are key to the long term sustainability and growth of coastal communities

Aquaculture has been recognised as representing a sustainable way to meet rising demand, while decreasing reliance on imports and relieving stress on overexploited European fish stocks. Aquaculture will not supplant capture fishing any time soon however, and sustainability in this sector must also be addressed. More efficient fisheries management (more adequate regulations, stronger enforcement, consideration of scientific advice, etc) and sustainable fishing methods are keys to a more sustainable approach to fishing.

In its most general sense, sustainable fishing is fishing that uses practices that are considered the long-term vitality of harvested species and the broader environmental impacts of fishing on the ocean. This approach has been championed by and gained momentum from the 'sustainable seafood' movement, which began in the 1990s. There is now a much higher awareness of the environmental impact of fishing practices among industry actors and consumers. Additionally, the movement has generated increasingly strict legislation, as well as consumer awareness, which is playing an important part in increasing transparency and engendering change in the industry. These evolving attitudes and increasingly informed and demanding consumers offer opportunities for European fishing industry to adopt sustainable practices and move up market.

Sustainable fishing practices can be broadly classified into two categories; more effective fisheries management and advocating for safeguards and regulations that curb environmentally destructive fishing practices.

According to an FAO (Food and Agriculture Organisation) study conducted in 2008 of the marine stocks it actively monitors: 53% were estimated to be fully exploited, 28% overexploited, 3% depleted and 1% recovering from depletion, 3% of the stocks were estimated as underexploited and 12% as moderately exploited.⁷⁶ Europe is one of the most highly regulated areas in the world in terms of the sustainable exploitation of aquatic resources. Nevertheless three-quarters of EU fish stocks are currently exploited at unsustainable levels and the European track record pales in comparison to that of other developed countries.

Problems subsist in the way in which quotas are set, lack of consultation of the scientific community and the overcapacity in Europe's fishing fleets, which all lead to chronic overfishing in the region. Overfishing also must be addressed proactively at the industry level, by shifting harvesting and marketing activities towards species that are environmentally preferable. For many of Europe's dangerously overfished species, alternatives exist that are similar in taste and texture and often lower cost. Industry can take responsibility by shifting activity away from overfished species and actively marketing new environmentally preferred species. This requires investment on the part of industry in order to shift consumer preferences, however, it is also an investment in future business sustainability.

While fishing affects fish stocks directly, marine ecosystems are also affected by a multitude of anthropogenic factors, such as; pollution by hazardous substances, eutrophication, effects of climate change, release of GMOs, introduction of non-indigenous species, environmental impact of shipping and the impact of offshore installations. Thus, in addition to addressing direct causes of overfishing, also includes a host of other environmentally sustainable practices that can be employed in the industry and indirectly affect the long-term vitality of marine life and the broader marine ecosystem. Some of the notoriously harmful fishing practices that have been targeted by

⁷⁶ FAO, The State of World Fisheries and Aquaculture 2010, Rome 2010, p. 35.

the sustainable seafood movement include massive bycatch, bottom trawling and tactics such as electro and dynamite fishing that still exist today in some areas of the world.

While regulations imposing quotas and bans on certain fishing techniques have helped protect the marine environment and, to some extent, stabilise fish populations, they do impose heavy costs that make it difficult to compete with cheap international imports that are often not held to the same standards. Nevertheless, retailing aquatic produce that was harvested and/or raised in an environmentally sensitive ways is increasingly being seen as a lucrative opportunity for the seafood business and a way of investing in the future sustainability of the industry.

Environmental and commercial organisations have already sought to establish criteria for measuring and confirming sustainable practices and responsible management of fish stocks. Using the market to encourage demand for products that meet these criteria has proven a successful practice. In the European market, several such certification schemes have already been established and accepted as offering the means for businesses to demonstrate their active role in improving the state of fish stocks and the broader aquatic environment.

Additionally, aquaculture is seen an important component in allowing the world's oceans to naturally replenish their resources and helping the fishing industry to sustainably exploit aquatic resources to meet rising demand. It uses techniques to increase the production of the farmed organisms beyond the natural capacity of the environment. Increasing public awareness and association of aquaculture and the sustainable seafood movement presents a unique opportunity for the industry to raise its profile, promote acceptance and tap into a growing market of consumers concerned about sustainability.

The following case study looks at research funding in the field of sustainable fishing for the implementation of an ecosystem-based approach to management in the Celtic Sea region.

Case Study: PISCES⁷⁷

PISCES is a 2,1 million euro project funded by DG Environment's LIFE programme that will look at methods to promote ecosystem-based approaches to the management of the Celtic Sea. The Celtic Sea region is an intensively frequented and exploited area with highly specific characteristics in terms of biodiversity and ecosystems. These specific characteristics led to the design and implementation of the 'Irish Conservation Box', a protected area covering over 100 000 km², where special measures are enforced to control fishing and other extractive uses.

The project, led by WWF-UK in partnership with WWF-Spain and The Environment Council with additional support from SeaWeb and the Coastal & Marine Resources Centre, University College Cork, involves a core group of 27 stakeholders from England, Wales, Ireland, France and Spain, from a broad range of activities such as coastal recreation, ports, shipping, offshore infrastructure, aquaculture and fisheries. These partners will collaborate with the aim to provide by 2012 a set of guidelines for delivering an ecosystem-approach to marine management for the Celtic Sea, enabling to ensure the continuity of these activities without jeopardising marine wildlife.

The ecosystem approach has been defined by the FAO the planning, development and management fisheries in a manner that addresses the multiple needs and desires of societies, without jeopardizing the options for future generations to benefit from the full range of goods and services provided by marine ecosystems. An ecosystem is a functional unit consisting of a collection of plants, animals (including humans), micro-organisms and non-living components of the environment, and the interactions between them

LIFE is the EU's financial instrument for supporting environmental and nature conservation projects across. Since 1992, some 3115 projects have been co-finance, contributing approximately €2 billion to the protection of the environment.

⁷⁷ <http://www.projectpisc.es>

Sustainable fishing trends summarised

- ▶ The sustainable seafood movement has raised awareness among consumers on unsustainable and environmentally harmful fishing practices.
- ▶ Adopting industry standards allows seafood producers to tap into upstream markets where environmentally conscious producers are willing to pay more for sustainable seafood products.
- ▶ Investing in sustainable practices and shifting towards environmentally preferred species has been shown to be a profitable and sustainable business model.
- ▶ Sustainable fishing is a fundamental component of a broader, more ecosystem-oriented approach to fisheries management.

5.1.3 Gastro-tourism as an example of innovative tourism, linking the seafood sector with the tourism industry

Many coastal communities in the Atlantic region have already made significant investments in developing their tourist sectors. In fact, with more than 2 million European citizens being employed in this sector, it is by far the largest single maritime economic activity. Furthermore, tourism is a key growth vector for coastal communities, with the gross average economic growth is expected to be 2-3% in the years to come and tourism has the unique potential to benefit remote regions, with otherwise limited economic activity.⁷⁸ The sector can have a particularly high level of economic impact through links with other industries, such as construction and hospitality.

However, the tourism industry is becoming increasingly competitive and the seasonality of mass tourist flows makes it difficult for local economies to sustainably develop this industry. Staying competitive and diversifying tourist flows increasingly requires developing new sectors of tourism that attract new clientele and visitors outside of the summer months. Going 'upmarket' and tapping into new and innovate forms of 'alternative' tourism' is a potential strategy for developing and diversifying tourist flows to coastal areas and addressing seasonality of mass tourism. Furthermore, this strategy **creates links between the fishing and seafood industries suffering from decline and the more dynamic tourism sector, allowing local economies highly reliant on traditional maritime industries to diversify their economic activity in a sustainable and high-value manner.**

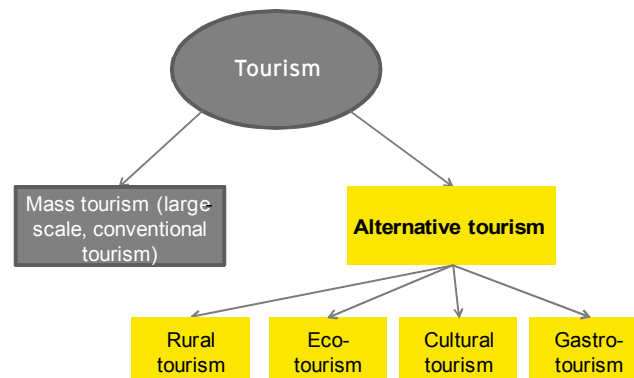
Alternative tourism, such as eco-tourism, cultural tourism, and rural tourism is not a new phenomenon; however, the rising demands of mature and high income segments in the developed world and the increasing numbers of individuals worldwide with disposable income has opened up the travel market to high levels of growth and competition and spurred demand for more 'customised' travel options. More specifically, the decreasing cost of travel and the proliferation of large-scale, budget travel options have subjected coastal communities to international competition and decreased traditional tourist flows to Europe's Atlantic coast.

The Atlantic coastal communities possess a number of levers to stimulate alternative forms of tourism, taking advantage of their;

- ▶ rich cultural heritage,
- ▶ natural beauty,
- ▶ nautical activities
- ▶ culinary heritage, and
- ▶ proximity to large population centres.

⁷⁸ Blue Growth, Scenarios and Drivers for Sustainable Growth from the Oceans, Seas and Coasts (DG MARE 2012)

Figure 15: Market for alternative tourism



Gastro-tourism in particular, represents a unique way for the seafood industry to tap into tourism growth potential and create high-value jobs. It offers the potential to raise the national and international profile of local produce, creating demand for local seafood producers, as well as ensuring a steady flow of tourists for local consumption.

Gastro-tourism can be defined as recreational travel for the purpose of experiencing the cuisine of a region. **Studies have shown that food is increasingly becoming an important criterion for demanding travellers.** The Travel Industry Association reported in March 2007 that over the previous three years alone, 27 million travellers engaged in culinary or wine related activities.⁷⁹ Thus, along with new trends in the more general travel category of alternative tourism/special-interest-travel, gastro-tourism has emerged to cater to the needs of increasingly demanding tourists. Further reinforcing the economic potential of these niche tourist markets, alternative tourism tends to attract a wealthier and older clientele and is currently growing at a rate faster than the international expansion of the tourism market.

A major challenge faced by the coastal tourism industry is its highly fragmented nature. A number of specialist publications and networks give small communities a platform to highlight local cuisine and culture to a growing number of discerning travellers. However, cooperation is becoming more important with increasing European and international competition. Coastal communities are finding it difficult to cooperate and exploit synergies that could help raise the profile of coastal tourism and diversify local offerings to cater to increasingly specific demands.

In this context, the European Commission is currently preparing a comprehensive overview of the recommendations and actions that can be sponsored and promoted at European level in order to reap the full potential of a sustainable and smart coastal and maritime tourism. The Atlantic strategy can equally serve as a platform to leverage European value added in this sector.

Nonetheless, the variety of challenges and opportunities that Europe's coastal communities face makes it challenging for EU, national and regional governments to formulate effective development strategies. Local governments are more in tune with the needs of their citizens and the economic realities of their communities.

However, one of the most important transversal barriers to sustainable growth is the fragmented nature of industry and governance. Local government strategy can often be short-term and erratic and cooperation with local stakeholders and neighbouring communities underdeveloped. Best practices show that local government must be the focal point of a thick web of stakeholder engagement that mobilises relevant actors and articulates coherent strategy. Local development programmes, like LEADER, Axis 4 and other national initiatives, provide relatively fragmented communities with an organisational platform and a channel of communication to those areas of government and policy that affect their future on the national and European level. The following case studies present instances of successful regional and supra-municipal cooperation that led to coherent strategies to develop gastro and other forms of alternative tourism.

⁷⁹ US Travel Association, Comprehensive Culinary Travel Survey
<http://www.ustravel.org/news/press-releases/comprehensive-culinary-travel-survey-provides-insights-food-and-wine-travelers>

Case Study: Wales, new top gastro-tourism destination?⁸⁰

A concerted effort, bringing together local producers, restaurant owners and government, is underway to put Wales on the map as a top food tourism destination in Europe. A number of news articles has acclaimed Wales, a region many British associate with the sour tang of Caerphilly cheese (that legend holds was developed by coal miners to replenish salt levels), as a 'rising star' in the field of gastro-tourism. Local restaurants have become increasingly confident in boasting their local culinary roots and tourism outfits are springing up, offering a range of gastro-excursions.

While Wales has long been known for its food festivals, such as Abergavenny, one of the UK's most renowned, it has also faced important perception barriers that have hindered competitiveness in tourism. A 2005 survey found that predominant perceptions of Wales included, rain, basic food and unfriendliness. Thus, Wales's food tourism strategy represents a bold attempt to turn a major perception barrier into an increasingly competitive tourism sector, while also strengthening a fundamental aspect of local culture for the Welsh.

While there has historically been a strong tradition of localism that permeates culinary heritage in Wales, shaping and refining a commercial brand requires cooperation and investment. The government supported initiative 'The True Taste', managed by the Food, Fisheries and Market Development Unit (FFMDD), has led an effort to create a 'credible Welsh food brand', which enables producers and retailers to promote Welsh produce at home and abroad. The 'True Taste' logo helps identify local food and beverage for discerning consumers and ten protected food name products expect to be developed by 2012. The initiative also works with local industry to raise the profile of Welsh cuisine at home and around the world by supporting and promoting festivals, helping local producers promote their food and beverage at exhibitions, sponsoring a traveling 'True Taste Kitchen', which promotes the brand to consumers and providing support to local industry through grants, mentoring and market research.

'True Taste' is one initiative that is part of a larger effort to increase the competitiveness and improve the perception of Wales as a travel destination. The Welsh government has developed a Food Tourism Action Plan in order to leverage the 2006 merger of the Welsh Development Agency and the Wales Tourism Board into the Welsh Assembly Government by articulating an integrated approach to food tourism. The overarching goal of the strategy is to multiply the links between food and tourism and increase economic impact. The action plan is an enable of the Food For Wales, Food From Wales 2010:2020 strategy, which goes beyond promotion of Welsh food abroad, taking an integrated approach to food policy through addressing strategic objectives such as sustainability, resilience, competitiveness and profitability.

While it is too early to begin to quantify the long-term impacts of the Food Tourism Action Plan and the broader food strategy, if the media hype is any indicator, local industry may soon be seeing important return on investment. Cooperation and collaboration between different levels of government and industry stakeholders has been critical to the articulation of a coherent and successful strategy that addresses long-term issues of sustainability and competitiveness in the food sector, while working to boost tourism and create new export markets.

Case Study: Transforming a mundane activity and revitalizing the harbour area⁸¹

Three markets in Noord-Holland in the municipalities of Texel, Den Helder and Den Oever have transformed the mundane act of purchasing fresh fish into a cultural and culinary experience that allows customers to learn about fishing and the "route to market" for plaice or hake. In addition to educating local citizens, these markets are now providing wider benefits for the area as tourist attractions and the considerable infrastructural investment undertaken has revitalised the harbour area.

The municipalities of Texel, Den Helder and Den Oever have been affected by the decline of the

⁸⁰ <http://wales.gov.uk/topics/environmentcountryside/foodandfisheries/foodandmarketdevelopmentpubs/foodanddrinkforwales/?lang=en>, <http://wales.gov.uk/topics/environmentcountryside/foodandfisheries/foodpolicyandstrategy/?lang=en>

⁸¹ <http://www.versevis.nl/>

fishing industry and there was a distinct lack of diversity surrounding the local seafood sector. For example, during the fishing season, the only activity in the harbours was the auction where locally landed fish was sold directly to wholesalers and large companies. In order to diversify economic activity and create direct links between fishermen and consumers, the Noord-Holland FLAG supported and facilitated cooperation between markets in the municipalities of Texel, Den Helder and Den Oever in undertaking structural investments and in jointly developing a website and other promotional tools, such as flyers, displays and information kiosks.

These investments have transformed the act of buying fresh fish for locals, as well as attracting visitors. The 'enhanced market experience' has now also been used to market other locally produced products such as cheeses, vegetables, meats and various organic produce.

Gastro-tourism trends summarised

- ▶ Increasing competition in Europe and internationally is putting pressure on the tourism industry of Atlantic coastal communities.
- ▶ Seasonal tourist flows pose obstacles to a more sustainable tourism sector development
- ▶ Tourism is one of the limited levers for diversification at the disposal of remote areas
- ▶ Tourists are becoming more demanding and increasingly seeking unique travel experiences
- ▶ Increasingly, quality food is being cited as a criteria for selecting vacation destinations
- ▶ Despite strong and sometimes negative perceptual barriers, coastal communities dispose of many rich resources that can be exploited and developed in the tourism sector (culture, culinary traditions, natural beauty, historical sites etc)
- ▶ Highly fragmented nature of the sector poses obstacles to the development of a long term strategy for sustainable coastal tourism

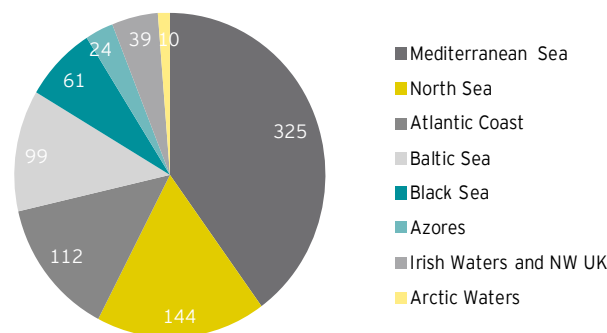
5.1.4 Prevention of invasive species is key to the sustainability of fisheries and aquaculture

An invasive species, or non-indigenous species, is “any species whose translocation into an environment outside its native geographical habitat, within historical times, has been either man-mediated (either intentionally or accidentally) or has been an action of active dispersal via natural pathways”.⁸² While natural boundaries ('dispersion barriers' such as salinity, ocean currents and temperature gradients) can evolve without human intervention, most of the principal vectors for the introduction of non-native species involve human interaction. Some of the principal vectors include;

- ▶ Organisms can travel unnatural distances attached to the submerged portion of a vessel's hull or in its ballast waters (ballast tank is a compartment within a vessel that holds water in order to facilitate hydrodynamic stability by moving the centre of mass as low as possible.)
- ▶ Aquaculture (either through intentional introduction into a harvesting enclosure from which they escape or directly through a dispersal method)
- ▶ Ornamental species trade
- ▶ Indirect introduction (natural movement facilitated by transformations in hydrological regimes (i.e. the building of a canal)
- ▶ Secondary introduction (species spread from a first area of translocation to a second they would not have been naturally able to)

⁸² Stretaris, Zenetos & Papathanassiou, (2005), “Globalisation in Marine Ecosystems: The Story of Non-indigenous Marine Species across European Seas”

Figure 16: Number of established non-indigenous species in Europe, Source: Overview of introduced aquatic species in European navigational and adjacent water ways (Gollasch)



Thus, while natural introduction vectors are possible, the majority stems from anthropogenic factors. Non-indigenous species introduction has also become known as ‘biological pollution’, because of the consequences that species translocation can have on the local ecosystem. While ecosystems evolve slowly overtime naturally, the introduction of non-native species can create ‘niche openings’ that allow for non-indigenous species to establish themselves (although not all translocated species can become ‘established’ in new environments. There are a multitude of means by which non-indigenous species can seriously disrupt local ecosystems. The most common consequences are; predation, mixing of exotic genes, competition, habitat modification and the introduction of non-native pathogens.

These direct consequences can cause disequilibrium in the wider ecosystem and provoke a series of indirect consequences. Just as not all species will be able to establish themselves in new environments, the ultimate impact of their arrival can vary widely in the gravity of the disruptions caused and size of the area disrupted. There are numerous documented examples of catastrophic consequences following the introduction of a non-indigenous species. ‘Destabilised’ ecosystems can ultimately pose dangers for human health and economic activity and are detrimental to the global level of biodiversity.

In Europe, the Mediterranean has been the most heavily impacted, while the Atlantic area counts 151 non-indigenous established species.⁸³ Delivering Alien Invasive Species Inventories for Europe (DAISIE), is an EU funded project that tracks alien species across all environmental milieus. On its “100 Worst List”, marine species affecting the Atlantic region include;

- ▶ *Balanus improvisus* (bay barnacle) is currently spreading in the Atlantic area. This species can dominate the community by competing for space and food. They change the habitat, fouling blue mussels and oysters and causes fouling of water intake pipes and heat exchangers, underwater constructions and ships' hulls.
- ▶ *Aphanomyces astaci* (Crayfish plague) is an Oomycete pseudofungus affects inland water bodies and littoral zones of inland surface water bodies across Europe, including the Atlantic region. It destroys European crayfish species in all infected watersheds. While the largest economic impact was in the late 19th and early 20th century, this pseudofungus is believed to be spreading and has had long-term effects on the crayfish population in Europe.
- ▶ *Codium fragile* (‘green sea fingers’ or ‘dead man’s fingers’) is a large marine green algae native to Japan affecting the Atlantic area. It can alter benthic communities and habitats, its dense fronds hinder movement of large invertebrates and fish along the bottom, and increases sedimentation and fouls shellfish beds, smothering mussels and scallops, clogging scallop dredges, and interfering with harvesting
- ▶ *Eriocheir sinensis* (‘Chinese mitten crab’) is found in littoral bodies of water and has migrated into streams and lakes in Northern Europe. The crabs disturb native ecosystems by competing for sustenance and space

⁸³ Overview of introduced aquatic species in European navigational and adjacent water ways (Gollasch, 2006)

With capture fishing expected to stay stagnant at best over the new decade, many industry leaders and policy makers are counting on the development of aquaculture to help offset expected increases in demand and reduce Europe's dependency on imported seafood. Increasingly, non-native species are being used for their favourable culture characteristics in aquaculture production. Furthermore, while it is not yet approved anywhere in the world, companies have begun exploring measures to increase efficiency through genetically modified fish. As mentioned, aquaculture is a vector for the introduction of non-indigenous species, pathogens and parasites into local ecosystems. If established, they have the potential to cause permanent damage to native species and the dynamics of the local environment. Some safety measures, such as the use of sterile stock or biosecure facilities can render commercial exploitation unfeasible, however, a proper equilibrium will need to be found in order to mitigate environmental risks and help ensure commercial viability.

Invasive species trends summarised

- ▶ The Atlantic area alone counts 151 known non-indigenous species.
- ▶ The introduction of non-indigenous species is due, above all, to anthropogenic factors.
- ▶ The establishment of non-indigenous species can have serious repercussions on an ecosystem and, in turn, on the health of Europe's fish stocks.
- ▶ Future trends in the seafood industry, notably the expected increase in aquaculture production, is accompanied by new risks in this domain
- ▶ More investment is needed in research initiatives to understand the effects of non-indigenous species and the present situation in Europe.

5.2 Challenges and gaps

This section briefly identifies the key challenges and 'gaps' resulting from the pre-workshop analysis of the individual subthemes above.

- ▶ Economic diversification is essential for coastal communities in the Atlantic region with a high reliance on traditional fishing industries. While diversifying into unrelated sectors is certainly important when possible, the potential for future sustainable growth in the seafood sector itself to provide diverse new income sources for communities is important. Furthermore, a number of opportunities have been identified for the seafood sector to tap into the growth potential of related sectors such as tourism.
- ▶ Despite general stagnation over the past decade, there are important future prospects for the expansion of the aquaculture industry in Europe (particularly macroalgae, offshore aquaculture, high-end sustainable options) and policy and industry leaders believe aquaculture can play a role in closing the seafood deficit. However, the industry suffers from relatively high levels of fragmentation, a lack of space for long-term expansion and significant pressure from international imports.
- ▶ While experts have identified several areas for potential strong growth within the aquaculture industry, there are important challenges to be overcome. For instance, industry experts agree that new innovation is needed to make widespread offshore aquaculture growth commercially and environmentally feasible and many high value-added opportunities, such as cosmetic and pharmaceutical uses of algae, still require significant research. Research in aquaculture is currently highly fragmented, with considerable overlaps and a lack of effective coordination and dissemination.
- ▶ The European fishing sector is highly fragmented, consisting principally of SMEs. Industry organisations that bring together actors from each step of the value chain (e.g. Seafish) can play an important role in pooling resources for promotional campaigns to increase consumer demand for locally produced, environmentally sustainable aquatic produce. Investing in environmentally sustainable practices will help stabilise the rate of depletion of aquatic resources, preserve fish stocks for the next generation, and increase the economic sustainability of the seafood sector in the short term
- ▶ The Atlantic coastal communities possess a number of levers to stimulate alternative forms of tourism, taking advantage of its rich cultural heritage, natural beauty, nautical activities and culinary heritage. Gastro-tourism and tourism related to fishing provide innovative means for attracting increasingly demanding travellers and diversifying tourism flows throughout the year, and away from traditional 'mass tourism' activities. The biggest barrier to further developing tourism, particularly concerning exploiting high value-added alternative tourist markets, is lack of cooperation and strategy. Case studies show that stakeholder engagement and buy-in, as well as cooperation between local and regional administrations is critical for success.

5.3 Potential areas for future action

This section addresses potential areas for future action resulting from a desktop review prior to the workshop. The objective of this list was to encourage workshop discussions.

5.3.1 Research priorities

Aquaculture

- ▶ New species suitable for offshore farming – and first, how should they be selected for domestication?
- ▶ Industrial uses of algae – bio fuel, pharma, fish and cattle feeds?
- ▶ Environmental impact of intensive off-shore aquaculture (e.g., additives, nutrients, disease prevention)
- ▶ Focus on technological advances needed to scale up offshore aquaculture

Sustainable fishing

- ▶ New species suitable for consumption to relieve burden on over-exploited stocks

Prevention of invasive species

- ▶ New research effort concerning the possible environmental impact of non-indigenous species in aquaculture
- ▶ Closer monitoring of non-indigenous species as an essential part of a more comprehensive approach to fisheries management.

5.3.2 Investment/policy actions

Aquaculture

- ▶ Address spatial planning to better integrate management of aquaculture with other coastal activities
- ▶ Exploit any possible synergies between aquaculture and other off-shore sectors that might generate innovative uses of limited space
- ▶ Provide more clarity in the legal regime covering offshore aquaculture
- ▶ Reinforce cooperation between relevant Member States to 'kick start' aquaculture growth, particularly, highly risky offshore exploitation

Sustainable fishing

- ▶ Stronger and more coordinated public campaigns to further raise awareness about sustainable fishing and sustainable European seafood
- ▶ Reinforced effort to better approach fisheries management through the lens of sustainability

Gastro-tourism

- ▶ More cooperation is needed between communities and stakeholders in order to articulate a strategic vision for tourism development and raise the profile of local tourism offerings

Prevention of invasive species

- ▶ More investment in the monitoring of non-indigenous species

6 Subtheme 3 – Inclusive Growth: demographic challenges in coastal communities

The third workshop focused on the ‘inclusive growth’ pillar of the Atlantic regions, i.e. the development of a high-employment economy delivering economic, and social and territorial cohesion in these areas.

According to the EU 2020 strategy, this means raising the employment rate (create more and better jobs, especially for women, young people and older workers), helping people of all ages anticipate and manage change through investment in skills & training, and ensuring the benefits of growth.

Within the definition of an Atlantic strategy, this workshop focused more particularly on addressing the demographic challenges faced by coastal regions and communities, with a view to maintaining coastal employment opportunities for young people whilst also supporting older people, and ensuring the right skills and education.

Topics addressed in this annex thus include (i) youth coastal employment, (ii) training, knowledge and skills development and retention, (iii) development and valorisation of marine cultural traditions, and (iv) support for the elderly coastal population.

These issues are, to a certain extent, very much linked to the topics discussed in workshop 1 and 2 as tourism and seafood are key sectors amongst all other sea-related sectors in coastal economies.

6.1 Overall context

The Atlantic area is a diverse region in many senses, encompassing both thriving, dynamic areas with good prospects for growth that attract young, highly educated migrants searching out new opportunities, and areas in chronic decline, economically, demographically and socially. Aggregate level statistics can provide a general idea of the region’s population, economic activity and general well-being, but looking at key indicators on the sub-regional level (NUTS 2 and 3) uncovers the area’s true diversity.

The most important demographic trends that can be noted across the Greater Atlantic Region are slow rate of expansion, or even contraction, of the working age population in most regions and the precipitous ageing of the population. Unemployment remains higher than the EU average and the region is home to both areas with chronic economic difficulties and more dynamic local economies. Finally, levels of educational attainment have increased across the board, however, there are some important gaps that still need to be addressed.

The Atlantic Coastal Communities grew at an average annualised rate of 0,7% from 2001 to 2009, slower than the just over 1% annual growth in the Greater Atlantic Region⁸⁴. While this is a healthy growth rate for Europe, it is driven to a large extent by the migration of older persons. Total population growth from 2002 to 2011 ranged from 17% in parts of Ireland, which became an attractive destination for Central and Eastern European immigrants during the 2000s before the crisis, to -2,3% in Alentejo, the sweeping agricultural region known as Portugal’s ‘breadbasket’⁸⁵. Looking at the rate of population change over time shows that the migration driving the high population growth in the fast growing regions collapsed precipitously with the crisis beginning in 2008. In the Algarve, the annual population growth plummeted from almost 2,4% to under 0,5% between 2007 and 2011⁸⁶. Annual growth in the other regions has been relatively stagnant or declining over the past decade and a more moderate downturn in growth can also be noticed beginning in 2008/2009. As mentioned, much of the population growth can be attributed to migration. The region’s average crude rate of natural population growth⁸⁷ was 0,9

⁸⁴ Eurostat Regional Statistics

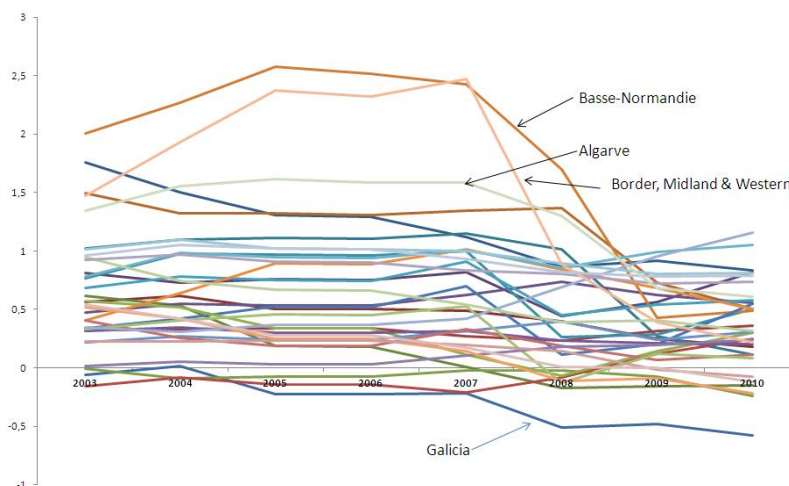
⁸⁵ *Idem*

⁸⁶ *Idem*

⁸⁷ Crude rate of natural population growth is the ratio of natural population growth over a period to the average population of the area in question during that period. The values are expressed per 1 000 inhabitants

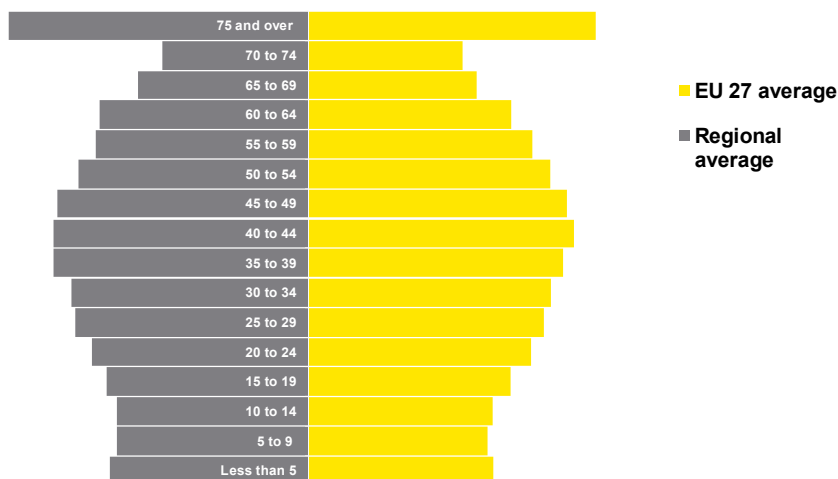
between 2002 and 2011, while the regional average of the statistically adjusted crude rate of net migration⁸⁸ was nearly 5 over the same period and much higher than the EU average of 2,9⁸⁹.

Figure 17: Annual evolution of growth rates in Atlantic region, source: Eurostat/Ernst & Young



The age structure of the region has evolved significantly over the past decade. The graphic below shows the age structure of the Greater Atlantic Region in 2010, along with the average EU 27 age structure the same year. The age structure in the region as a whole does not differ significantly from that of the EU. The past decade has seen a considerable expansion of the 75 and older age bracket, the total population of which in the Atlantic region grew by almost 20%⁹⁰. The growth in this demographic has been variable over the region. The highest rates of growth for the 75 and over population were in Spain, Portugal and Parts of France. For example, in País Vasco and Andalucía this population grew by nearly 35% over the past decade, while the northwest UK saw the lowest rates⁹¹.

Figure 18: Age pyramid of the Greater Atlantic Region and EU 27 average, source: Eurostat/Ernst & Young



⁸⁸ Crude rate of net migration including statistical adjustment is the ratio of net migration during the year to the average population in that year. The values are expressed per 1 000 inhabitants

⁸⁹ Eurostat Regional Statistics

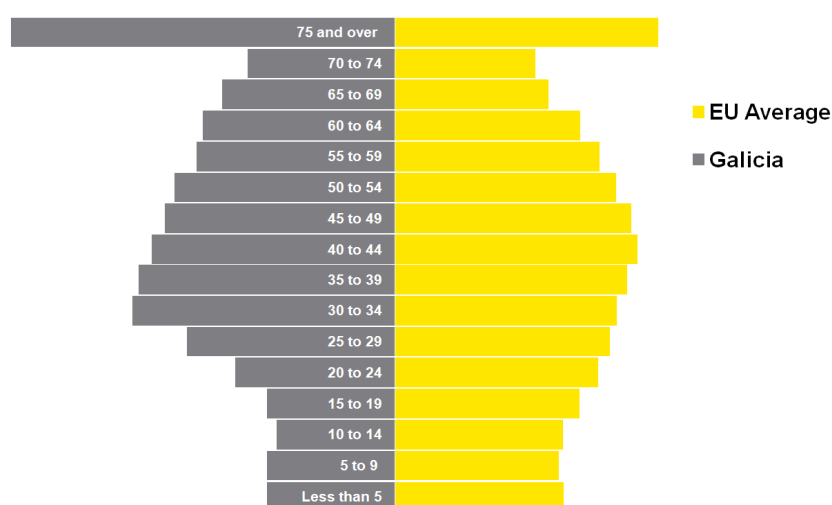
⁹⁰ *Idem*

⁹¹ *Idem*

Meanwhile, younger age brackets have become relatively less significant in terms of size or even smaller in real terms. The population of 20 to 24 year olds shrunk in real terms in parts of Portugal and Spain. For instance, the population of Alentejo shrunk from nearly 52 500 to 39 400 from 2002 to 2011⁹². However, some areas have seen relatively important influxes of young people. Most Atlantic areas of the UK and Ireland showed healthier, albeit, slow rates of growth in the 20 to 30 age brackets.

High growth in the 75 and over bracket, particularly in areas of Southern Portugal and Spain, coupled with the high general rates of expansion of the population largely driven by migration can be attributed to the growing tendency of well-off individuals to retire in coastal areas. The most concerning trends are in areas, such as Spain and Portugal, that have faced chronic economic problems, as well as stagnating demographic trends. For instance, Galicia has faced an average unemployment rate of over 12% over the past decade (17% in 2011), while the population for 20 – 24 and 25 – 29 have shrunk by 10% and 29% respectively over the past decade⁹³. With a low natural rate of growth, migration consisting mainly of retirees and net emigration of younger citizens, regions like Galicia are facing shortages of young, qualified workers.

Figure 19: Age pyramid of Galicia and EU 27 average, source: Eurostat/Ernst & Young



The average employment rate⁹⁴ across the entire region in 2011 was 65%, or roughly ten points below the target of 75% set by Europe 2020⁹⁵. The regional average employment rate during the same year in the 55 – 64 year old age bracket was lower at roughly 49%⁹⁶. On an aggregate level, these rates have been stagnant over the last decade, deteriorating slightly beginning in 2008, with some outliers, such as Andalucía, seeing sharper drops following the crisis. The regional average hides a wide variation with employment rates in 2011 varying between 48% and 73%. The average unemployment rate across the region in 2011 was a little over one point above the EU average (9,7%) at 10,9%. Again, this indicator at the regional level poorly illustrates the diversity of the region, with unemployment rates varying between 6% and 30% in 2011⁹⁷.

The weakest areas of the Atlantic region in terms of employment are north-western Spain and Portugal and Ireland (Andalucía, 30,4%, Algarve 15,6% and Border, Midland and Western 15,5%), while the strongest areas are concentrated in the south-western UK (Dorset and Somerset, 6,1%, Cornwall and Isles of Scilly, 6,2% and Cheshire with 6,2%)⁹⁸. France and the Northwest UK, Wales and Scotland varied around the average. While the crisis has driven up unemployment across the board since 2008, some areas in particular had been suffering from chronically high unemployment, notably in Spain. Long-term unemployment rates⁹⁹ logically reflect the same

⁹² Eurostat Regional Statistics

⁹³ *Idem*

⁹⁴ The proportion of working age adults employed (15 – 64)

⁹⁵ Eurostat Regional Statistics

⁹⁶ *Idem*

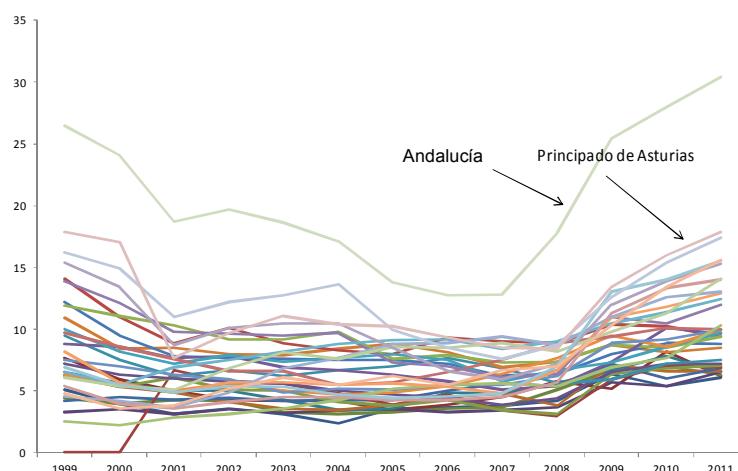
⁹⁷ *Idem*

⁹⁸ *Idem*

⁹⁹ The proportion of the unemployed having been out of work over 12 months

patterns as the unemployment and employment indicators, ranging between 1,5% in East Wales to over 12% in Andalucía¹⁰⁰.

Figure 20: Evolution of the unemployment rate in the Atlantic region, source: Eurostat/Ernst & Young



The average levels of education throughout the entire region are generally higher than the EU average, although they lag behind averages in Western Europe. 30% of the population aged 25 - 64 in the Atlantic region had completed a tertiary education in 2011 with the lowest levels found in Portugal (Centro 14%) and the highest in the País Vasco (45%)¹⁰¹. Apart from the notable exception of Portugal, a majority of regions in the Atlantic area did not stray far from the average. Concerning upper secondary educational attainment in the 25 – 64 bracket, there is a noticeable gap between attainment Portugal and Spain, with regional levels in 2011 as low as 17% (Alentejo and Centro), and the rest of the region (France, UK and Ireland), although there were isolated pockets of under-attainment in these Member States¹⁰². The general trend for both secondary and tertiary rates has been positive over the past decade, particularly for the latter, the average in 2002 being only 23%¹⁰³. However, the gap in upper secondary attainment, explained mostly by an agrarian past, slow modernization of school systems and high levels of both highly educated and under-educated workers, is only slowly closing.

Continuing education among adults aged 25 - 64, an important indicator in regions undergoing economic transitions was, on average, higher than the EU 27 average in 2011 with 11,4% of adults partaking in some sort of formal training or education¹⁰⁴. In most of the region, this number has been very slowly rising over the past decade, with the notable exception of the UK, which experiences a huge spike in adult education in the early 2000s, before the numbers precipitously fell back to the average by 2010/2011.

¹⁰⁰ Eurostat Regional Statistics

¹⁰¹ *Idem*

¹⁰² *Idem*

¹⁰³ *Idem*

¹⁰⁴ *Idem*

Figure 21: Evolution of tertiary educational attainment in the Greater Atlantic Region, source: Eurostat

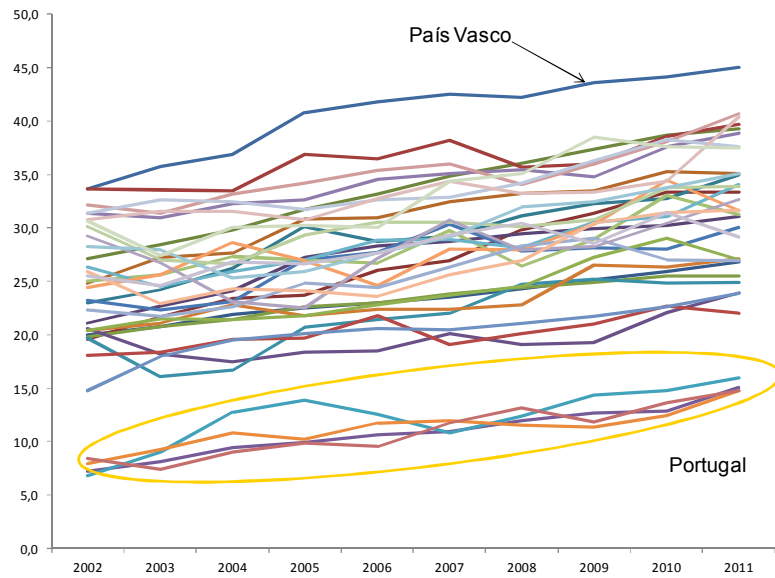
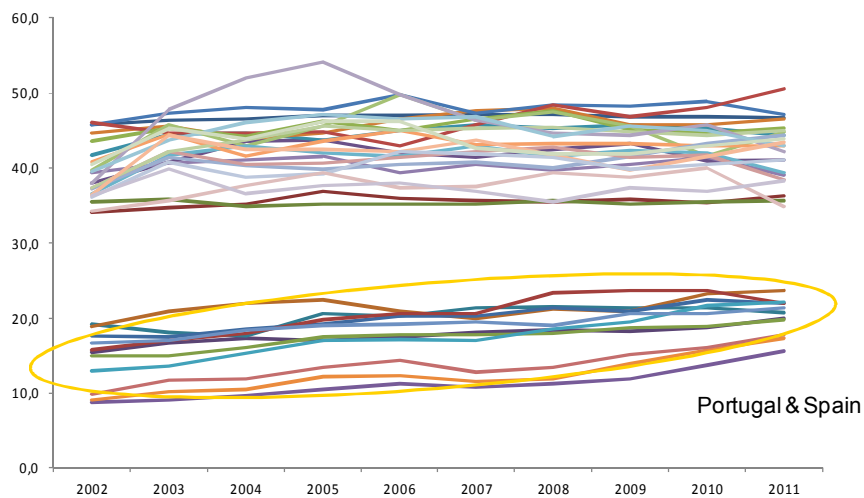


Figure 22: Evolution of upper secondary educational attainment in the Greater Atlantic Region, source: Eurostat



Demographic changes and economic shifts will require targeted employment initiatives

However coastal regions are undergoing significant demographic changes, shifts in purchasing power, and are experiencing a lack of skilled professionals. The sector needs to adjust its business models in order to address these changes, particularly through innovation and sustainable value propositions to transform the traditional maritime economic activities and overcome the challenges.

The on-going socio-economic changes in coastal regions can be characterised as a “double movement”.¹⁰⁵ On one hand, the fisheries sector is experiencing shrinking stocks, new technologies are increasing harvesting efficiency, and expanding national and international fisheries management systems are changing the face of fisheries management. Furthermore, there is a trend towards increased aquaculture production, and a focus on more local, environmentally friendly, small scale fisheries adjusted to local needs.

¹⁰⁵ Holm, Petter (2001). *The Invisible Revolution. The Construction of Institutional Change in the Fisheries*, Norwegian College of Fishery Science, University of Tromsø, Tromsø.

On the other hand, the tourism sector is expanding, leading to situations where communities previously dependent on fisheries are changing their focus towards an emerging recreational potential for coastal tourism. These opportunities are typically based on the specific qualities of the local coastal region. At the same time these disappearing fisheries communities are providing attractive settings for short term visitors and retirees seeking coastal housing.

Whilst there is much variation along the Atlantic coast, aspects of this “double movement” can be widely seen. Many communities need to cope with a decline in employment in fisheries and ship-building, a shift of mass tourism to sunnier climates, and the growing tendency for the elderly people to retire to coastal regions.¹⁰⁶ These challenges must be met through measures to assist in the restructuring of the labour and employment market, as well as through innovation to add value to fish products, diversification activities and the development of culture marine heritage.

Potential measures to address the challenges include the creation of new high-added value jobs in coastal regions, and an associated workforce training and re-skilling programme to ensure that the population has the required competencies. In addition, there needs to be wider mutual recognition of training and professional qualifications, so that maritime expertise can be retained and attractiveness of maritime professions restored.¹⁰⁷ Furthermore, the skills and experience of retired maritime industry professionals needs to be exploited to attract younger generations to maritime careers.

6.2 Baseline and trends

The section below presents a number of baseline trends regarding employment challenges in the coastal and maritime economy. These trends are impacted by the changing demographic profile of coastal communities. In this section, a number of initiatives and case studies are presented, to provide an overview of some of the initiatives in place to overcome the challenges identified.

Two particular challenges are presented in the first section relating to maintaining employment for young people and retaining knowledge and skills – the need for a qualified and trained workforce to meet the challenges of the future maritime economy, and the need to attract and retain Europeans in maritime employment. Following this, a number of initiatives and instruments that seek to address maritime employment, training and re-skilling are presented.

The subsequent section looks at the theme of the importance of maintaining and developing marine cultural traditions as a means for creating jobs and growth. In this section, a number of projects and initiatives through various European instruments that highlight the importance of traditional maritime activities are presented.

Finally, an overview of key elements of the policy and legal framework are presented, including the recognition of professional qualifications, and international conventions on maritime labour.

6.2.1 Maintaining employment for young people and retaining knowledge and skills

Qualified and trained workforce to meet the challenges of the future maritime economy

The success of the Integrated Maritime Policy rests on a solid, high quality and well-trained workforce across a wide range of maritime economic sectors. In order to achieve “Blue Growth”, Europe needs to develop and adopt instruments that are integrated into the field of maritime training.

Maritime regions are particularly aware of this need, given a lack of interest on the part of young people in maritime careers, from shipbuilding and offshore industry, maritime transport to maritime research and tourism.¹⁰⁸ This then translates into an increasing skilled labour shortages, and recruitment and retention issues. This point

¹⁰⁶ COM(2011) 782 final, “Developing a Maritime Strategy for the Atlantic Ocean Area”, November 2011.

¹⁰⁷ COM(2011) 782 final, “Developing a Maritime Strategy for the Atlantic Ocean Area”, November 2011.

¹⁰⁸ CRPM (2011), Vasco da Gama: Youth Mobility Instrument for Tomorrow’s European Maritime Policy”, http://www.crpm.org/pub/docs/196_en-vasco_da_gama_outil_de_mobilite_des_jeunes.pdf

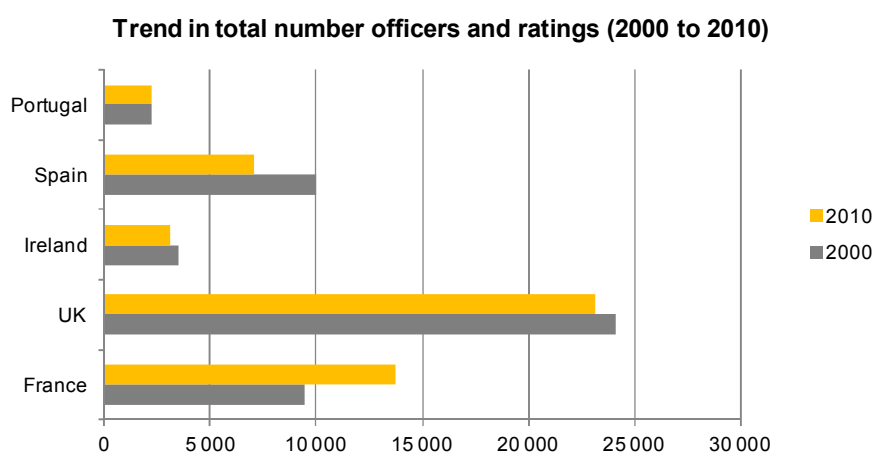
was highlighted in a 2008 report¹⁰⁹ on the role of Maritime Clusters, which argued the difficulty in attracting potential employees and young people to the maritime sectors, in particular to the offshore professions is mainly due to the increasing importance of a work-life balance in modern society and the ageing of officers. Furthermore, due to these changing demographics, the maritime industry has to compete with other industries for an ever-decreasing number of young school leavers.

Moreover, the report¹¹⁰ argues that attracting people to offshore activities is not only important for the shipping and offshore sectors, but also for the onshore maritime sectors. This is because offshore staff can be of great use at a later stage of their career because of their valuable experiences and competences (e.g. port and service related).

According to a 2006 Ecorys study “it is widely acknowledged that a shortage of national seafarers exists in the OECD countries”, and that “shipping countries, shipping councils, trade unions and maritime training institutes throughout the EU agree that the principal reasons for this are limited opportunities for career progression, poor working conditions and loss of social life”.¹¹¹

This is supported by the following statistical trend comparing the evolution in the number of EU seafarers from 2000 to 2010. Of the Atlantic Member States, only France has seen an increase in seafarers over this period. However, direct comparisons of figures from ISF/BIMCO manpower study 2000 and 2010 must be considered with great caution, as changes in sources or counting methodology may have occurred for some Member States during this period. Even considering that differences between 2000 and 2010 may not be fully reliable, the table gives a trend in the manpower changing in EU during this period.

Figure 23: Total number of seafarers (officers and ratings) in Atlantic Member States (2000 and 2010), Source: ISF/BIMCO 2000 and 2010 manpower studies



Attracting and retaining Europeans to maritime careers

The education and training of seafarers is an important issue for the EU, in order to maintain and develop the level of knowledge and skills in the maritime sector in the EU as well as in the interest of maritime safety. Attracting and retaining Europeans to maritime employment requires the integration of a number of components:¹¹²

- ▶ access to affordable **initial training programmes** leading to qualifications that are recognised as ensuring the competences needed;

¹⁰⁹ Policy Research Corporation, “The role of Maritime Clusters to enhance the strength and development of European maritime sectors”, a reported commissioned by DG MARE in 2008

¹¹⁰ Policy Research Corporation, “The role of Maritime Clusters to enhance the strength and development of European maritime sectors”, a reported commissioned by DG MARE in 2008

¹¹¹ Ecorys (2006), “Study on the Labour Market and Employment Conditions in Intra-Community Regular Maritime Transport Services Carried out by Ships under Member States’ or Third Countries’ Flags”

¹¹² Report of the Task Force on Maritime Employment and Competitiveness and Policy Recommendations to the European Commission, June 2011, <http://ec.europa.eu/transport/modes/maritime/seafarers/doc/2011-06-09-tfmecc.pdf>

- ▶ sufficient opportunities for acquiring **practical experience at sea** as part of or immediately following initial training programmes;
- ▶ assurances that **initial employment will be available**, preferably on vessels registered under the national flag or flags with good reputations;
- ▶ the availability of **programmes of continuing education** permitting seafarers to add to their initial skills and qualifications giving them the possibility to offer more than basic seafaring competence and possibly advance to more senior or different roles, within and outside shipping;
- ▶ a real **perspective of roles being available to them on land** after they have been at sea for a number of years, either in shipping or the broader maritime cluster.

Programmes need to be developed to strengthen the attractiveness of maritime careers and make training programmes more vocational. A good example of this is the Vasco de Gama pilot project, presented below.

*Case study: Vasco de Gama pilot project*¹¹³

The Vasco da Gama pilot scheme, launched by the CPMR during the General Assembly in Aberdeen in 2010, is established under the leadership of the Region of Mecklenburg-Vorpommern. The ultimate objective is that the project be translated into a transnational mobility instrument from 2014, essential for developing the attractiveness of maritime careers for young people.

A “core group” of around ten regions actively participated in the preparatory phase, including the Atlantic regions of Haute-Normandie (France), Basse-Normandie (France), Brittany (France), Cantabria (Spain), and Asturias (Spain).

The participating regions have defined five priority policy areas for the implementation of the first trans-national exchanges of young students and professionals:

- ▶ *Maritime transport (led by Varna)*
- ▶ *Ports and logistics (led by Valencia)*
- ▶ *Ship building (led by Basque Country)*
- ▶ *Marine energies (led by Brittany)*
- ▶ *Tourism and water based activities (led by Asturias).*

A key objective of the project is to provide a clearer picture of the range of European training programmes on offer, which is a key preparatory stage before developing relevant mobility schemes. The project is also seeking to identify obstacles that hinder international mobility of students and young workers. It will provide a forum for discussions on strategies to make the sector more attractive for young people.

Various European maritime professional organisations, in particular in the ship-building, cruise, and port professions sectors, have shown their support for this project.

The Task Force on Maritime Employment and Competitiveness recognises the current and future challenges

Competent maritime professionals are necessary for several reasons – not only do they uphold maritime safety and safeguard the marine environment, but they are needed to support the growth and the prosperity of the maritime industry in Europe. To respond to an increasing shortage of European seafarers, as well as recruitment and retention issues, the EU must develop more convergent systems for ensuring attractive initial training, entry to the profession, higher education and career development both in shipping and the broader maritime cluster. If no action is taken, it is likely to persist and even increase in the coming years to the detriment of the maritime industry.

¹¹³ CRPM (2011), Vasco da Gama: Youth Mobility Instrument for Tomorrow's European Maritime Policy", http://www.crpm.org/pub/docs/196_en-vasco_da_gama_outil_de_mobilite_des_jeunes.pdf

In 2010, the Commission established a Task Force on Maritime Employment and Competitiveness to develop ideas on ways to strengthen the attractiveness of the seafaring profession while keeping the EU shipping industry competitive. Topics covered included the labour market, the attractiveness of the profession, the maritime cluster's needs, training and qualifications and working and living conditions. Key objectives were to identify obstacles both to entry to the maritime profession by European youth and their recruitment by European employers and to subsequently develop recommendations.

Existing community career development instruments to address challenges

Several funding tools are available at an EU level in the field of education and training. However to date unfortunately there have been **few maritime applications and projects making use of these instruments**. The Consultation on Blue Growth found that “two-thirds of the respondents are not aware of any specific initiatives and partnerships underway in Member States and regions to address [skills, qualifications, and overall education and employment]”.¹¹⁴

The EU has developed a number of instruments on **vocational education and training** that might prove useful in the maritime area, including:

- ▶ The **European qualification framework** (EQF), which aims to relate different national qualifications systems to a common European reference framework, through promoting better understanding and transparency of qualifications across EU.
- ▶ The **European credit system for vocational education and training** (ECVET), which helps to validate, recognise and accumulate work-related skills and knowledge acquired during a stay in another Member State, so that these experiences contribute to transfer credits from one qualification system to another
- ▶ The **Europass**, which is a single portfolio of documents to support job and geographical mobility to enable individuals to present their qualifications and skills using a standard format throughout Europe.
- ▶ The **European Quality Assurance Reference Framework for VET** (EQAVET), which helps member states to develop, improve, guide and assess the quality of their VET systems by offering a common tool for quality management practices.

The **EU lifelong learning programme** has a budget of nearly EUR 7 billion for 2007-13. It funds various actions including exchanges, study visits and networking activities. There are four sub-programmes which fund projects at different sectors of education and training: "Comenius" for schools, "Erasmus" for higher education, "Grundtvig" for adult education and "Leonardo da Vinci" for VET Structural funds. Two examples in the maritime sectors, one for Erasmus, and one for Leonardo da Vinci, are presented below.

Case study: AQUA-TNET¹¹⁵

AQUA-TNET was a multidisciplinary Thematic Network that united the academic and vocational aspects of the Bologna reforms and the establishment of the European Higher Education Area in the field of Aquaculture, Fisheries and Aquatic Resources Management. The network was funded under the European Commission Socrates Erasmus programme, from 2005-2008. The network brought together 109 partners, representing universities, training organisations, associations and research performers working in aquaculture, fisheries and aquatic resource management.

There were six themed work packages:

- ▶ *Masters and Masters of Science curriculum development and assessment*
- ▶ *PhD curriculum development and assessment*
- ▶ *Proposed transparency measures (including Qualifications Frameworks) and quality assurance*
- ▶ *Measures to improve student mobility*

¹¹⁴ Blue Growth: sustainable growth from the oceans, seas and coasts: Summary Report of the Online Public Consultation Results, http://ec.europa.eu/dgs/maritimeaffairs_fisheries/consultations/blue_growth/blue-growth-consultation-report_en.pdf

¹¹⁵ AQUA-TNET, <http://www.aquatnet.com/>

- ▶ Innovation in teaching (e-learning and ICT technologies and their role in joint degrees)
- ▶ New methods of language training and promoting language diversity

Case study: GETAFIX¹¹⁶

GETAFIX (Gaining Educational Training Analysis For Identifying Cross Border Systems) is carried out with financial support of the Lifelong Learning Programme, Leonardo da Vinci, Partnerships. This project investigates skippers qualifications within the Small Commercial Vessel (SCV) maritime sector of the EU. The qualifications of one Member State are not recognised by authorities of other Member States, each of which runs a different syllabus with different standards, regulations and proficiency levels. Because professional/commercial qualifications are not universally accepted throughout the Member States, restrictions are placed on qualified personnel, both trainers and workers/ trainees, resulting in a significant labour mobility problem.

The key project objectives of GETAFIX are:

- ▶ to share between partner organisations, experiences of working conditions and restrictions;
- ▶ to establish the extent of the problem regarding lack of recognition of qualifications, across all EU Member States;
- ▶ to gather data to compare the systems of all EU Member States;
- ▶ to create transparency of existing regulations, qualifications and learning outcomes;
- ▶ to demonstrate commonalities and disparities between the systems;
- ▶ to highlight 'Best Practice' ; and
- ▶ to generate discussion on a system for transferable learning credits within the industry, such as ECVET.

The **Youth on the Move initiative**, launched in 2009 by José Manuel Barroso, President of the European Commission, offers all European young people the possibility of studying or training in another European Member State. One of its key aspects is to support development of transnational learning and labour mobility for young people.

Under the framework programmes, **research funds** covering social dimensions may also be used to develop and validate new approaches to skill development: for example, with the objective of improving the operational efficiency of ship operations together with safety and job satisfaction. An example is presented below:

Case study: KNOWME project¹¹⁷

The KNOWME project covers the main issues addressed by the European Commission in the "Maritime Transport Strategy 2009–2018" focusing on the 'human factor' which is addressed in the FP7 work programme 2010. The project addresses the growing shortage of maritime professionals, especially qualified merchant marine officers, which is impacting on the significant risk of decreased competitiveness of the European maritime industry in general.

The project seeks to create a maritime industry knowledge network for raising the knowledge level of the sector's human resources and improving its image and marketability among key decision-makers, the labour market, and the public. It has three key objectives:

- ▶ create and disseminate a modern 'image of shipping' which attracts young people both for the seafaring professions and careers onshore within the maritime sector
- ▶ enhance the attractiveness for professionals and young people both of the seafaring professions and careers onshore within the maritime sector and its competitiveness compared

¹¹⁶ GETAFIX project, <http://www.getafix.eu/>

¹¹⁷ KNOWME project, <http://www.know-me.org/>

to other sectors

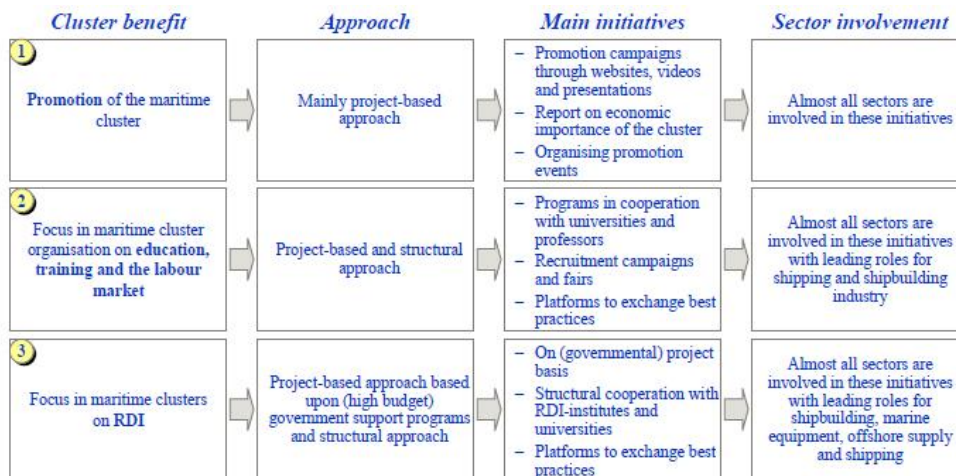
- ▶ establish a knowledge network of centres of excellence in maritime transport and logistics training as one of the foremost academic and industry networks for innovative education and R&D

KNOWME comprises a total of 11 partners: 10 research institutions and 1 SME consultancy, from six European countries (UK, Germany, Sweden, Belgium, Greece and Norway).

Maritime clusters ensuring a skilled workforce and promoting labour mobility

Maritime clusters have a large labour mobility within their sectors. In the Netherlands almost 30% of maritime labour intake and outflow comes from or goes to other maritime sectors.¹¹⁸ Key aspects and benefits of clustering include promotional activities that can enhance possibilities to cooperate efficiently, a focus on education, training and the labour market, and a focus on research, development and innovation. These three aspects are illustrated below:

Figure 24: Good practices in national maritime cluster organisations based upon main cross-sector trends (Source: Policy Research Corporation, cited in "The role of Maritime Clusters to enhance the strength and development of European maritime sectors", a reported commissioned by DG MARE in 2008)



A number of regional maritime clusters exist in the Atlantic region, each of which work towards addressing the challenges posed by education, training and the labour market:

- ▶ **French Maritime Cluster (Le Cluster Maritime Français (CMF)):**¹¹⁹ Training is recognised as the bedrock of the maritime economy, and this focus is ensured through cluster members including the naval graduate college, the four merchant navy training colleges, the European Maritime Training Centre, the Défense Conseil International, the Ecole de Management de Normandie and its Port Management Training and Research Institute, the Euromed Management School, Sogreah-Port Revel, the Université de Nantes, and AGEFOS PME, the first private administrator of vocational training funds in France. In addition, in terms of recruitment, the CMF is represented by CLIC&SEA (an employment website), H2P (HR consultant), Inter Pole Naval and Industry (specialist in naval engineering jobs), and La Touline (professional insertion of maritime personnel). Finally, in response to demands for career transition, the Department of Maritime Affairs (DAM), the French Navy and the CMF have worked together to develop a simplified system of equivalent qualification ratings aimed at helping those servicemen in career transition to obtain the merchant navy qualifications needed to work in companies in the maritime sector.

¹¹⁸ Ecorys (2006) – Monitor maritime labour market. More information concerning this labour mobility is included in Annex 12.

¹¹⁹ Le Cluster Maritime Français, <http://www.cluster-maritime.fr/>

- ▶ **Sea Vision UK:**¹²⁰ is a forum which brings together over 190 marine organisations to work on areas of common interest. This cluster specifically works to support the development of education and careers activities by the sector, and raise awareness of the range of activities and careers available to young people. Led by the Chamber of Shipping, those involved in the initiative include the manufacturing sector (shipyards and marine equipment producers), ports, marine financial and legal services, the leisure sector (both boat-building and recreational activities), Government, the Royal Navy, commercial fishing, academia, professional institutes and societies, and others.
- ▶ **Basque Maritime Forum (BMF):**¹²¹ a non-profit making organization established in 1993 that brings together companies, associations, banks, research centres and universities. The BMF's mission is to represent, defend, consolidate, promote and improve the competitiveness of the companies in the Basque maritime sector by means of the services it offers in line with its Core Strategic Areas (Internationalisation, Technology, Management Excellence, Finance and Taxes, Training and People and Communication, Information and Representation). The BMF has helped set up the Cluster Marítimo Español (the Spanish Maritime Cluster), as well as a significant number of regional clusters.
- ▶ **Spanish Maritime Cluster (Cluster Marítimo Español):**¹²² the purpose of this cluster, which brings together companies, related institutions, is to merge the interests, knowledge, know-how, business culture and styles of all its members for productivity gain, and competitiveness. The main contribution of the clusters to the competitiveness of companies are is through the creation of knowledge between the participating entities, improving productivity through greater specialization and complementarity between their activities, promoting innovation, notably through joint research, and finally, the increased bargaining power of firms, which significantly reduces costs.
- ▶ **Irish Marine Institute:**¹²³ is the national agency responsible for Marine Research, Technology Development and Innovation (RTDI). The Institute seeks to undertake, to co-ordinate, to promote and to assist in marine research and development and to provide such services related to marine research and development that will promote economic development and create employment and protect the marine environment. A key initiative is SmartOcean (ICT for the Sea) Strategy. Launched in 2010, the strategy seeks to harness Ireland's natural marine resources and specialist expertise in Marine Science and ICT to establish Ireland as a leader in the development of high value products and services for the global marine sector.
- ▶ **Oceano XXI (Association for the Knowledge and Economy of the Sea):**¹²⁴ is a private non-profit corporate body whose main goal is to boost the Marine Economy and Knowledge Cluster by promoting cooperation among scientific institutions, enterprises and associations related to the many branches and activities whose functional area of end demand is the sea. One of its four main objectives is to reinforce research, technological development, innovation and training in marine matters, and it encourages projects that support the promotion of qualifications in the marine sector.

Local development programmes: LEADER and Axis 4 of the EFF to address specific needs of coastal communities

Local Development Programmes such as LEADER and Axis 4 of the European Fisheries Fund (EFF) have helped to provide fragmented communities with an organisational platform, a voice and a channel of communication to those areas of government and policy that affect their future.

Through particularly Axis 4 of the EFF, Member States have been able to design and implement projects that address demographic changes and the need to diversify activities and innovative through adding value to fisheries products, in order to create employment. An example of a project in the area of training and skill development is presented below.

¹²⁰ Sea Vision UK, <http://www.seavision.org.uk/shipbuilding-manufacture/home>

¹²¹ Basque Maritime Forum, <http://www.foromaritimovasco.com/indexen.php>

¹²² Cluster Marítimo Español <http://www.clustermaritimo.es/>

¹²³ Irish Marine Institute, <http://www.marine.ie/Home/>

¹²⁴ Oceano XXI, www.oceano21.org

Case study: Tourism training for fishermen - FLAG Northern & Eastern Lapland – Finland¹²⁵

This project offered an integrated package of training courses, tailor made for fishermen who wanted to diversify into tourism.

The number of professional fishermen in Sodankylä, Finland, has halved since the early 2000s and the remaining 20 fishermen were eager to find ways to complement their income by diversifying into tourism. However, they lacked the skills and licenses to make this a reality. Following discussions with their local FLAG, a group of specialists was brought together to develop and deliver a tailor made training package. This included courses and exams in safety issues as well as study visits to tourism companies, allowing fishermen to forge contacts with other tourism operators and learn from experts in the field. A further 10 days of training focused on product development, pricing and customer service and was complemented by seven days of personalised study and guidance.

This project equipped 14 of the 20 local fishermen with the qualifications, safety certificates and skills to develop and offer a successful tourist package. Between them, they developed a total of seven marketable products for five fishermen and the nearest big tourist resort (www.luosto.fi) has started to market winter net fishing trips and summer river fishing trips with the local professional fishermen. The project also led to the organization of further training courses at the request of participating fishermen.

6.3 Developing marine cultural traditions to create economic growth and employment

The 2008 report¹²⁶ on Maritime Clusters cited limited public awareness of the importance of maritime sectors as another maritime trend and key challenge. Maritime transport accounts for more the 90% of world trade of goods, however, because ships, ports and their related manufacturing and services have been moving away from cities, the public awareness of the importance of maritime transport seems to have been declining. Maritime sector and cluster organisations have indicated that this limited public awareness of the importance of their activities leads (or could lead) to recruitment difficulties and a shortage of government initiatives and policy.¹²⁷

Furthermore, a key message in the Maritime Policy Green Paper of 2006¹²⁸ was the importance of protecting maritime heritage and increasing public awareness. It noted that the various maritime sectors should cooperate to raise public awareness of maritime heritage and the role that oceans and seas have in all our lives. The Commission suggested using education as a channel for action, arguing a more positive image would make it easier to recruit seafarers.

The figure below shows the importance of traditional maritime sectors in terms of added value and employment. It shows that the Atlantic Member States are key players in traditional maritime sectors, accounting for 37% of added value (€45.5 billion) and 34% of employment (646 million persons).

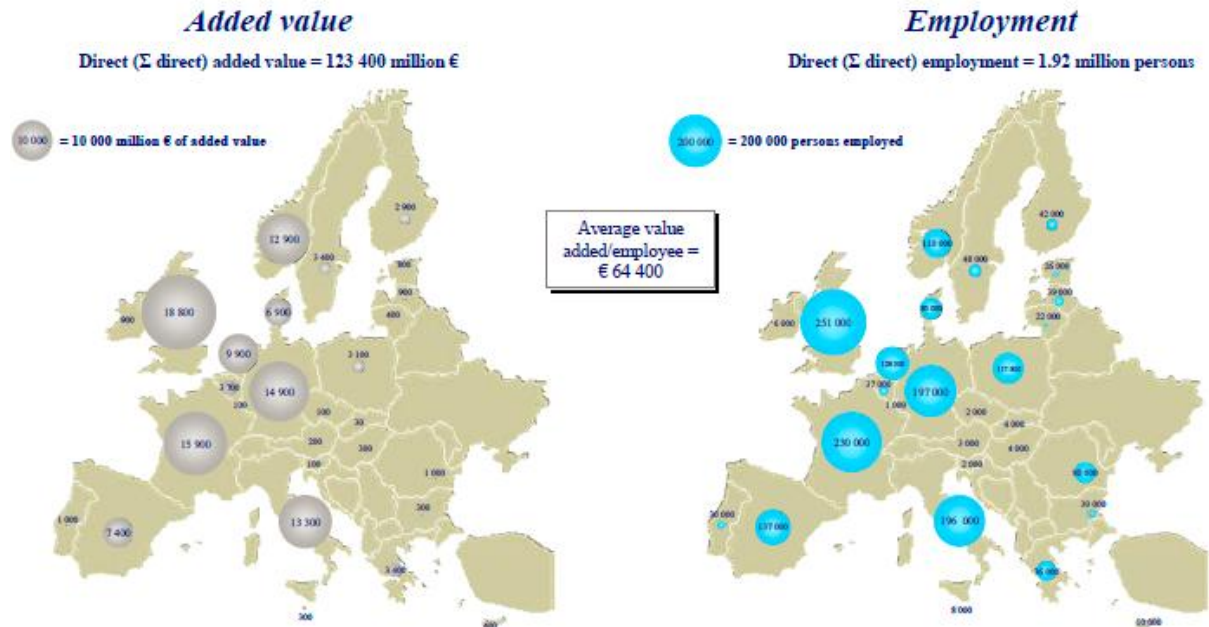
¹²⁵ <https://webgate.ec.europa.eu/fpfis/cms/farnet/tourism-training-fishermen-flag-northern-eastern-lapland-fi>

¹²⁶ The role of Maritime Clusters to enhance the strength and development of European maritime sectors

¹²⁷ The role of Maritime Clusters to enhance the strength and development of European maritime sectors

¹²⁸ COM/2006/0275, Green Paper - Towards a future Maritime Policy for the Union : a European vision for the oceans and seas - "How inappropriate to call this planet Earth when it is quite clearly Ocean"

Figure 25: Added value and employment for traditional maritime sectors in the EU and Norway (Source: Policy Research Corporation, cited in "The role of Maritime Clusters to enhance the strength and development of European maritime sectors", a reported commissioned by DG MARE in 2008)



A number of projects and initiatives have been introduced through various European instruments in order to highlight the importance of traditional maritime activities, and improve the image of the sector. An example of one of these initiatives is the DORNA project, presented below, that focuses on the valorisation of marine cultural heritage in the Atlantic region.

Case study: DORNA project¹²⁹

DORNA ("Organised and Sustainable Development in the Atlantic Northwest") , falling under the Framework of the Atlantic Area Programme and financed through the ERDF, promotes the conservation and recovery of the traditional nautical heritage of the European Atlantic coastal regions as an endogenous element for local development.

The project has identified a series of problems that are common to all European regions with Atlantic coast: particularly the loss of boatyards of traditional vessels. The recovery of these boatyards and the valorisation of this sector not only seeks to restore the conservation of maritime cultural heritage, but also to exploit its environmental and social potential as an internal factor for economic regional development. Its specific objectives are the following:

- ▶ *Identification and valorisation of the nautical heritage of the European Atlantic regions.*
- ▶ *Promotion and recovery of the culture related to Atlantic traditional boats.*
- ▶ *Endogenous and sustainable development of the naval sector in the Atlantic Area with a specialization on traditional vessels.*
- ▶ *Development of tourism by bringing into the market new products (traditional boats) related to Atlantic culture.*

The project aims to create a network of regions to develop a common strategy for the recovery of Atlantic traditional boats and promote the Atlantic cultural heritage, such as traditional vessels and boatyards. Its global strategic goal is the achievement of significant and tangible progress in

¹²⁹ Project DORNA, <http://www.proyectedorna.eu/index.php?ididioma=3>

matters of transnational cooperation with the objective of favouring a cohesive, sustainable and balanced territorial development of the Atlantic Area and its maritime heritage.

The economic development of the regions involved in DORNA is one of its main challenges and will take place through, 1) the reactivation of the naval sector focused on traditional boats through the definition and creation of the brand BATE (Traditional Euro-Atlantic Boat) and, 2) through actions that will foster Atlantic tourist routes through the creation of an integrated tourist product, with a consistent focus on quality and sustainability.

A number of projects focusing on preserving and exploiting the benefits of marine cultural traditions have been implemented as part of Axis 4 of the EFF. These projects have focused on innovating through adding value to fisheries products, in order to create employment. A sample of three key projects is presented below.

Case study: Commercialisation of new goose barnacle products - FLAG Ria de Vigo-A Guarda - ES¹³⁰

With its 1,200 km of coastline Galicia has an important fishing tradition and a well-developed fisheries industry. The extraction of goose barnacle in Galicia is established as an artisanal fishery widely regulated, seeking a responsible way of fishing.

'Mar de Silleiro' is a collective formed in 2005 by barnacle pickers, in search of a solution to problems in the management of natural goose barnacle stocks. Commercialising only fresh barnacle posed limitations, as the price would vary according to the demand, supply and quality of the product. Lower quality barnacles (smaller or full of water) had very little value on the market, however they still needed to be gathered to stop them colonizing the habitat of better quality barnacles in higher demand.

In response to this issue, the idea of preserving the barnacle was born. An opportunity was identified to use these lower grade barnacles, with the aim of transforming barnacles into different gastronomic products such as barnacle paté and naturally canned barnacle. Through a financial contribution from the barnacle pickers forming the collective, as well as funding through the FLAG group – local action group formed in the context of Axis 4 of the European Fisheries Fund – the collective has been able to diversify its activities and in the process, create new jobs across the production, promotion and sale of the products. It is an initiative which has contributed strongly towards maintaining traditional jobs in the sector and the creation of a brand of products called 27 percebeiros.

Case study: Developing a recreation area - FLAG Lake Võrtsjärv – Estonia¹³¹

The main aim of the project was to develop the tourism potential of Jõesuu, an area in the north of the Lake Võrtsjärv region, by developing fishing tourism and building on the area's fishing culture and traditions. A supportive entrepreneurial environment has been established and, with the help of fishing-oriented tourism products, visitors have been attracted to the area. These tourism products included trips in an old sailing boat ("kale-boat") and demonstrations of traditional fishing methods and tools.

Thanks to its historical, cultural and natural assets, the region has many potential visitor attractions. However, before the project it was not actively promoted as a tourist destination and its tourism infrastructure was under-developed. As a result, local entrepreneurs had little interest in investing in tourism products/services or raising standards. Many potential tourism attractions were poorly presented and were sometimes inaccessible.

The main objective of the project was to develop the tourism potential of Jõesuu by establishing an integrated, varied and sustainable network of visitor services, and developing activities on the waterway. The ultimate aim was to create one of the most attractive tourism destinations in

¹³⁰ Mar de Silleiro, <http://www.mardesilleiro.com/es/benvidos.php>, and <https://webgate.ec.europa.eu/fpfis/cms/farnet/commercialisation-new-goose-barnacle-products-flag-ria-de-vigo-guarda-es>

¹³¹ <https://webgate.ec.europa.eu/fpfis/cms/farnet/developing-recreation-area-flag-lake-v%C3%B5rtsj%C3%A4rv-ee>

southern Estonia. The kale-boat, in particular, was intended to capitalise on the area's fishing heritage by demonstrating traditional fishing methods to tourists on board, telling stories and jokes and presenting an overview of the local fishing area, Lake Võrtsjärv. During the kale-boat tour, tourists are offered smoked fish to eat and learn how the fish are cleaned and smoked.

The success of the project activities was demonstrated by the fact that the number of the visitors to the Lake Võrtsjärv Visitor Centre increased from 3 990 in 2007 to 7 829 in 2010. Of these, 70% were Estonian tourists. In addition, 2 490 people sailed in the kale-boat in 2010, compared with 2 100 in 2007, and two jobs were created and maintained in the Võrtsjärv Foundation.

The project was the winner of the contest, "Undiscovered treasures of Estonia 2010", in recognition of its focus on cooperation and sustainable tourism, the quality of its tourism products, and its identified need for a long term tourism strategy. It was also recognised as a "European Destination of Excellence" in 2010.

Case study: Fishing organisation diversifies its ice production - FLAG Litoral Costa Ebre - Spain¹³²

This project offers an example of how fishing organisations can be innovative in seeking to safeguard and improve their revenue by diversifying their traditional activities (in this case ice production) and tapping into new markets (tourism and restaurants).

Many fishing organisations, or "Cofradías", in Spain produce ice for the local fishing boats they serve, allowing them in turn to derive some income from this service. However, the reduction in the number of fishing boats based in Ametlla de Mar, Catalonia, resulted in a decrease in the demand for ice of 17% from 2009 to 2010.

Faced with the prospect of laying off one of its two staff members, the Cofradía decided to diversify its ice producing activities and seek out new markets. With support from the Delta del Ebro FLAG, the Cofradía adapted its ice making equipment so that it could produce ice-cubes for local restaurants and bars. Taking advantage of the touristy nature of the area, the Cofradía linked up with the local tourism agency and local distributors to secure clients for what is already proving to be a profitable activity.

This is a consolidated project that has been running and producing profits for some time. As a result, the cofradía produced around 40 000 kg of ice cubes in 2010, which translated into a turnover €46 000. Besides maintaining the 2 jobs mentioned, it also allowed the Cofradía to create a new part-time job towards the end of 2009 which became full-time in 2010.

6.3.1 Policy and regulatory framework is complex

Maritime Labour Convention

Under the Maritime Labour Convention (Regulation 2.8) established in 2006, Member States are required to have "National policies that encourage career and skill development and employment opportunities for seafarers, in order to provide the maritime sector with a stable and competent workforce", where the aim of such policies shall be "to help seafarers strengthen their competencies, qualifications and employment opportunities. Under the same Convention, "Each Member shall, after consulting the shipowners' and seafarers' organizations concerned, establish clear objectives for the vocational guidance, education and training of seafarers whose duties on board ship primarily relate to the safe operation and navigation of the ship, including ongoing training".

International Convention on Standards of Training, Certification and Watchkeeping (STCW)

¹³² <https://webgate.ec.europa.eu/fpfis/cms/farnet/de/fishing-organisation-diversifies-its-ice-production-flag-litoral-costa-ebre-es>

The International Convention on Standards of Training, Certification and Watchkeeping sets qualification standards for masters, officers and watch personnel on seagoing merchant ships. Adopted in 1978, STCW was the first convention to establish basic requirements on training, certification and watchkeeping for seafarers on an international level. Previously the standards of training, certification and watchkeeping of officers and ratings were established by governments, usually without reference to practices in other countries. As a result standards and procedures varied widely, even though shipping is extremely international of nature.

The Convention was significantly amended in 1995 by the IMO. The most significant amendments concerned enhancements of port state control, communication of information to IMO to allow for mutual oversight, quality standards systems, oversight of training, assessment, and certification procedures, and rest period requirements for watchkeeping personnel.

Directive 2008/106/EC on the minimum level of training of seafarers

This Directive lays down a system of EU-wide recognition of third countries which comply with the requirements of the STCW Convention for the purpose of recognition by the Member States of individual seafarers' certificates of competency issued by these countries. The Commission with the assistance of EMSA has assessed a number of third countries and to date more than 30 such countries have been recognised at EU level according to the provisions of the Directive. On 14 September 2011 the Commission adopted a proposal for amending this directive in order to bring it in line with the latest developments of the STCW Convention.

Directive 2005/36/EC on the recognition of professional qualifications

Restrictive regulation of professional qualifications has a stifling effect on mobility. Recognition of qualifications obtained in another Member State has thus become a fundamental building block of the Single Market. As highlighted in the Europe 2020 Strategy and the Single Market Act, professional mobility is a key element of Europe's competitiveness. It is therefore essential that the Professional Qualifications Directive sets out clear and simple rules for the recognition of professional qualifications.

Social conditions to support employment in maritime sectors

In 2011, the Commission developed a Social Agenda for Maritime Transport, with the objectives to:

- ▶ create/safeguard an adequate maritime labour force for the European shipping and maritime clusters;
- ▶ create/foster employment of European seafarers;
- ▶ safeguard the European maritime know-how;
- ▶ promote maritime safety and security and the protection of the environment.

This initiative includes a Communication and legislative proposals regarding the enforcement of the International Labour Organisation (ILO) Maritime Labour Convention, 2006 through port state control and the integration into EU legislation of the revised International Maritime Organisation Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW Convention).

6.4 Challenges and gaps

Opportunities for the Blue Economy are significant, and Atlantic Member States are in a good position to make the most of these growth opportunities. In the Atlantic, marine-related industries and services contribute roughly 1.8% to the Gross Domestic Product and 2.1% to employment opportunities¹³³. More than a third of the value of the maritime sector in the North-East Atlantic is generated by coastal tourism and shipping, with tourism and the fishing industry being the largest employers. The maritime transport and seafood sectors are important for Ireland, and in France, Portugal and Spain coastal tourism is the largest employer of the maritime industries.¹³⁴ New

¹³³ SEAS-ERA WP 6.1, A draft Marine Research Plan for the European Atlantic Sea Basin, October 2011

¹³⁴ Blue Growth, Final Report, Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coasts, 13 August 2012

industries are also developing, with marine renewable energy (wind, wave and tidal energy production) the fastest growing activity in coastal and offshore waters.

However the Atlantic region, as for Europe in general, is facing challenging demographic shifts, including an **ageing population, low birth rates, changing family structures and migration**. Some of these demographic changes are particularly accentuated in coastal regions. In almost 60% of EU coastal regions, the share of seniors is higher than the national level, and in 34% of these regions, the over-representation is greater than 1.1 times the national level.¹³⁵ A key factor in the **over-representation of seniors originates from migratory movements to coastal regions**, in addition to longer life expectancy and decreasing birth rates. The consequences of these shifts include a growing shortage of maritime professionals.

Whilst a number of Community tools have been put in place to address vocational education and training, lifelong learning and youth mobility programmes, there has been **little focus to date on the application of these measures to maritime and coastal sectors**. The Vasco de Gama pilot project¹³⁶ however is a **regional example of a practical initiative** focusing on the challenges facing maritime sector employment.

Projects of the LEADER programme and Axis 4 initiatives undertaken by FLAGs in the context of the European Fisheries Fund also provide **relevant examples of how coastal communities can add value to products, diversify their activities, and develop cultural and fisheries heritage** in order to create sustainable value and employment. The challenge of the Atlantic Action Plan will be in **identifying successful project ideas that could be applied at a regional level**.

Furthermore, whilst there are a number of national and regional maritime clusters focusing on education, training and labour mobility in the maritime sectors, there still seems to be a **lack of cross-national Atlantic regional level networks of authorities, stakeholders and other organisations responsible for maritime training and careers to promote innovation** and the convergent development of best practice in the field.

Atlantic regional level networks could **take more advantage of the existing community funds and instruments**, in the fields of vocational education and training like EQF and EQAVET as well as available financing like Leonardo, the European Social Fund and funding for relevant research projects including those having a social character. They could also **encourage job mobility between various maritime economic sectors at the local level of maritime clusters**.

There is a need to **cooperate and organise education and training at the regional level to raise public awareness of maritime heritage**, and improve the image of the sector and the increasingly important role that oceans and seas play. Cultural valorisation projects at the regional level such as DORNA could be encouraged and replicated where possible as part of the Atlantic Action Plan.

The Final Report on Blue Growth pointed to the **need to anticipate maritime skills needs**. It points out that with an ageing population, this situation may even be aggravated in the future. The Atlantic Action Plan may provide an opportunity to develop projects that:

- ▶ Use of the European Social Fund to promote initiatives aiming at the training and increasing awareness at schools and universities for the maritime economy;
- ▶ Strengthen the links between universities and companies;
- ▶ Ensure that the EU Skills Panorama is developed in a way that is most beneficial for the maritime sector.

Finally, **little focus seems to be given to support to older populations in coastal communities**, in terms of utilising their skills to train the new generations, or providing to those parts of the population that still form part of the workforce. No evidence has been found of particular Axis 4 or LEADER projects that have focused on the integration of the older populations in coastal communities. This could potentially be addressed as part of the Atlantic Action Plan.

¹³⁵ Eurostat 38/2010, Portrait of EU coastal regions, http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-10-038/EN/KS-SF-10-038-EN.PDF

¹³⁶ CRPM (2011), Vasco da Gama: Youth Mobility Instrument for Tomorrow's European Maritime Policy", http://www.crpm.org/pub/docs/196_en-vasco_da_gama_outil_de_mobilite_des_jeunes.pdf

6.5 Potential areas for future action

This section addresses potential areas for future action resulting from a desktop review prior to the workshop. The objective of this list was to encourage workshop discussions.

6.5.1 Research priorities

- ▶ Research into better understanding demographic profile of different coastal regions, particularly in relation to skills inventory and anticipated needs

6.5.2 Investment/policy actions

- ▶ Better tap into existing initiatives of maritime clusters in relation to retraining, recruitment and labour mobility and apply in other Atlantic MS
- ▶ Investigate possibility to establish a specific Atlantic region cluster focusing on education, training and labour mobility issues
- ▶ Investigate opportunity to widen scope and ensure sustainability of the Vasco de Gama project
- ▶ Investigate opportunities to broaden the scope (to an Atlantic regional level) of best practice EFF Axis 4 projects that focus on diversification of activities, adding value to fish products, and development of marine cultural traditions and heritage.