



European Economic and Social Committee

TEN/554
Innovation in the
Blue Economy

Brussels, 15 October 2014

OPINION

of the

European Economic and Social Committee

on the

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Innovation in the Blue Economy: realising the potential of our seas and oceans for jobs and growth

COM(2014) 254 final/2

Rapporteur: **Mr Boland**

Co-rapporteur: **Mr Lobo Xavier**

On 14 March 2014, the European Commission decided to consult the European Economic and Social Committee, under Article 304 of the Treaty on the Functioning of the European Union, on the

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Innovation in the Blue Economy: realising the potential of our seas and oceans for jobs and growth

COM(2014) 254 final/2.

The Section for Transport, Energy, Infrastructure and the Information Society, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 1 October 2014.

At its 502nd plenary session, held on 15 and 16 October 2014 (meeting of 15 October), the European Economic and Social Committee adopted the following opinion by 143 votes to 1 with 1 abstention.

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1. Summary of conclusions and recommendations

- 1.1 The EESC welcomes the Commission document, which sets out to maximise the employment potential of our seas and oceans through innovation, with specific emphasis on marine biotechnology, ocean energy and seabed mining.
- 1.2 The EESC is concerned by the lack of coordination of measures initiated by the private and public sectors and notes that similar tensions exist among Member States. Equally, the lack of adequate data and data systems necessary for accurate information about our seas and their potential is impeding innovation development, in spite of the efforts made by several universities and knowledge institutes across the Member States. The EESC believes that failure to resolve these issues is costing Europeans the opportunity to access new potential employment.
- 1.3 The EESC maintains that the Innovation Union flagship initiative is fundamental to the development of the blue economy but needs increased support from the Commission. Such support includes having the necessary legislative backing as well as long term financial aid, aligned with more information about the existing innovation programmes.
- 1.4 The EESC strongly recommends that the weaknesses identified by the Innovation Union flagship initiative should be tackled by the Commission and the individual Member States as a matter of urgency.

- 1.5 The EESC recommends that in tandem with the scientific approach of the document, there is a need to integrate coastal tourism strategies into the process in order not only to boost civil society's interest in the subject but also to benefit from integrated cooperation between the two visions of the process.
- 1.6 The EESC recommends that coastal and island communities that are experiencing serious decline in the traditional industries, including fishing, should be fully included at all stages of the development of the blue economy so as to guarantee the correct balance between R&D and tourism activities that can create jobs and prosperity. In recommending this, the EESC would specify that all communities affected by the blue economy should be represented in a meaningful dialogue among all of the stakeholders. Furthermore, these communities, and more specifically islands, have clear potential here and a specific contribution to make as regards innovation within the blue economy.
- 1.7 In the development of strategies to advance employment in the blue economy it is essential that innovation in areas such as shipbuilding, aquaculture, port infrastructure and fishing is included. Because there is already an increasing need to comply with various environmental demands, the EESC recommends that all marine policy measures formulated by the Commission should focus on the employment potential of adapting to new environmental requirements.
- 1.8 It is clear that the achievement of increased employment through blue economy innovation will be very slow under the present policy. In that context, the EESC strongly recommends that the European Commission seeks agreement from all parties on a smart timetable that focuses measures to achieve a quick delivery of all strategies.
- 1.9 While welcoming the measures proposed by the Commission, the EESC strongly believes that they are insufficient in number and lack adequate commitment from the Member States. In that context, there is a need to hold a special EU summit on blue economy innovation before 2016. This would involve the ministers for maritime affairs and associated responsibilities. The aim would be to prioritise key strategies and agree timetables for implementation that are reasonable to all Member States according to their characteristics. Also, as regards the proposed blue economy and science forum scheduled for 2015, the Committee recommends that civil society, including workers and marginalised groups are properly represented.

2. **Explanation and background**

- 2.1 In 2011, the European Commission adopted a communication on blue growth¹, which demonstrated the employment potential of supporting our oceans, seas and coasts around

¹ Blue Growth opportunities for marine and maritime sustainable growth, COM(2012) 494 final.

Europe. It also singled out the role that ocean energy could play as regards increased employment opportunities.

- 2.2 Currently, it is estimated that between 3 and 5% of the EU's GDP comes from the overall maritime sector, which employs around 5.6 million people and generates EUR 495 billion for the European economy. Some 90% of foreign trade and 43% of intra-EU trade takes place via maritime routes. European shipbuilding, including allied industries, accounts for 10% of global production. Almost 100 000 boats are in operation around Europe, either in fisheries or aquaculture. Also, other more recent activities, such as mineral extraction and wind farms, are developing (*The European Union explained: Maritime affairs and fisheries*, 2014, http://europa.eu/pol/pdf/flipbook/en/fisheries_en.pdf).
- 2.3 It is also understood that all Member States and EU bodies are concerned that the unsustainable use of our seas threatens the fragile balance of marine ecosystems. This in turn challenges marine initiatives that seek to create more jobs and contribute to the European 2020 strategy.
- 2.4 The Commission is also aware of weaknesses identified by the Innovation Union flagship initiative such as: under-investment in knowledge, poor access to finance, the high cost of intellectual property rights, slow progress towards interoperable standards, ineffective use of public procurement and duplications in research. Other weaknesses identified in the Commission's Annual Growth Survey for 2014 include: not enough collaboration between the public and private sectors on innovation, poor transfer of research results into goods and services and a growing skills gap.
- 2.5 The availability of data detailing seafloor characteristics, such as mapping of seabed habitats, seabed geology and other uncertainties connected with the sea, is limited and acts as a barrier to faster innovative development.
- 2.6 The considerable number of initiatives managed by European Commission policy is noted. These include:
- the availability of data free of restrictions;
 - integration of data systems;
 - adoption of the European Strategy for Marine Research.
- 2.7 Despite the Common Fisheries Policy reform, there are thousands of coastal communities in decline. Many of these now find that they cannot compete on the seas and would require considerable support towards upgrading their fishing fleets. There is also a decline in the ancillary services such as boat building, maintenance and the provision of other associated services.

2.8 Seas around Europe include: the Adriatic and Ionian Seas, the Arctic Ocean, Atlantic Ocean and Irish Sea, the Baltic Sea, the Black Sea, the Mediterranean Sea and the North Sea.

3. **Context of the Commission communication**

3.1 On Thursday 8 May, the European Commission presented an action plan on "innovation in the blue economy". The general aim of this communication is to realise the potential of job creation and growth in our oceans and seas. It proposes a series of initiatives to gain better knowledge of the ocean, improve the skills needed to apply new technologies in the marine environment, and strengthen the coordination of marine research. The following measures have been proposed:

- Deliver a digital map of the entire seabed of European waters by 2020.
- Create an online information platform, to be operational before the end of 2015, on marine research projects across the Horizon 2020 programme as well as nationally funded marine research, and to share results from completed projects.
- Set up a blue economy business and science forum, which will involve the private sector, scientists and NGOs to help shape the blue economy of the future and share ideas and results. A first meeting will take place in conjunction with the 2015 Maritime Day event in Piraeus, Greece.
- Encourage research, business and education players to map out the needs and skills for tomorrow's workforce in the maritime sector by 2016.
- Examine the possibility of major players from the research, business and education communities forming a Knowledge and Innovation Community (or KIC) for the blue economy after 2020. KICs, part of the European Institute of Innovation and Technology (EIT), can stimulate innovation in multiple ways, for example by running training and education programmes, reinforcing the path from research to market and setting up innovation projects and business incubators.

3.2 Individual industries that make up the blue economy include: aquaculture, coastal tourism, marine biotechnology, ocean energy and seabed mining.

3.3 While in economic terms, the blue economy accounts for the sustainability of 5.4 million jobs and generates a gross added value of almost EUR 500 billion a year, it must be noted that marine biotechnology, ocean energy and seabed mining have yet to be developed as net economic contributors.

3.4 It is the Commission's view that each of these sectors can contribute substantially to the blue economy in the following ways:

- Marine biotechnology offers the possibility of exploring the sea to undertake DNA sequencing using new underwater technology. The critical mass of all EU countries involved will stimulate lucrative niche markets.

- Ocean energy is still an emerging sector. Properly managed, it has the potential to achieve renewable energy and greenhouse gas reduction targets. The potential of economic growth as a result of new innovative technologies is seen as realistic, given the progress already made.
 - Seabed mining has the potential to create jobs based on the knowledge that the quantity of minerals occupying the ocean floor is potentially large. With due regard for environmental concerns, the retrieval of these minerals is likely to fill gaps in the market where either recycling is not possible or adequate, or the burden on terrestrial mines is too great. While still small, this sector has the potential to generate sustainable growth and jobs for future generations.
- 3.5 The blue economy benefits from the EU's Innovation Union flagship initiative, which aims to create an innovation-friendly environment. The new programme Horizon 2020, worth EUR 79 billion is the EU's largest research and innovation programme.
- 3.6 The document also outlines weaknesses of the initiative, which include under-investment in knowledge, poor access to finance, the high cost of intellectual property rights, slow progress towards interoperable standards, ineffective use of public procurement and duplications in research.
- 3.7 The measures proposed by the Commission include:
- From 2014 onwards, a sustainable process that ensures that marine data is easily accessible, interoperable and free of restrictions.
 - By January 2020, a multi-resolution map of the entire seabed of European waters.
 - By the end of 2015, an information platform on marine research across the whole Horizon 2020 programme as well as information on nationally-funded marine research projects.
 - In 2015, the first meeting of the blue economy business and science forum.
 - In the period of 2014-16, the establishment of a marine sector skills alliance.
- 3.8 It should be pointed out that the Commission document does not define "the blue economy". However, the EESC notes the definition given in the EU's third interim report of March 2012 entitled *Scenarios and drivers for sustainable growth from the oceans, seas and coasts*, which states that "blue growth is hence defined as 'smart, sustainable and inclusive economic and employment growth from the oceans, seas and coasts'". The maritime economy consists of all the sectoral and cross-sectoral economic activities related to the oceans, seas and coasts. While these activities are often geographically specific, this definition also includes the closest direct and indirect supporting activities necessary for the functioning of the maritime economic sectors. These activities can be located anywhere, also in landlocked countries. Maritime employment is all the employment (measured in terms of full time employment – fte) resulting from the above activities related to the oceans, seas and coasts.

4. **General comments**

- 4.1 The potential of the blue economy in Europe will be realised if Member States and all stakeholders including civil society are actively involved in the development of policies and local solutions that tackle the many weaknesses identified by the Innovation Union flagship initiative as well as those detailed in the 2014 Annual Growth Survey.
- 4.2 The Innovation Union flagship initiative is fundamental to the development of the blue economy. However it will need considerably more support and development if it is to realise the economic potential of our seas.
- 4.3 In the context of the European semester, the Commission must make sure that the Member States' national reform plans mainstream policies reflecting blue growth priorities.
- 4.4 The reality of sea pollution, much of which originates on land has real implications for a future sustainable blue economy. Equally, environmental concerns arising from seabed mining, the need for better port infrastructure and improvements that increase the environmental quality of the shipping industry, if not tackled immediately, will limit the employment possibilities of the blue economy.
- 4.5 The plight of coastal communities that are affected by the wider European economic crisis and are dependent on the blue economy will require particular attention in the form of greater linkages to EU programmes such as the Common Fisheries Policy.
- 4.6 In Europe, the fragmentation of policies and measures aimed at improving the economic value of our oceans and seas has been an impediment to achieving sustainable economies under the different economic categories. Equally, the potential of blue economy agreements between Europe and the USA and other global interests have the capacity to create increased employment.
- 4.7 The blue economy is dependent on the development of the shipbuilding industry, which comprises around 150 large shipyards in Europe, with around 40 of them active in the global market for large sea-going commercial vessels. Around 120 000 people are directly employed by shipyards (civil and naval, new building and repair) in the European Union. The Commission document should reflect in greater detail the contribution of shipping to the overall blue economy.
- 4.8 In tandem with the scientific approach of the document, there is a need to integrate coastal tourism strategies into the process in order not only to boost civil society's interest in the subject but also to benefit from integrated cooperation between the two visions of the process. Overarching all development is the requirement to adapt to environmental requirements and identify opportunities.

- 4.9 The Commission's document is very focused on the scientific research that is obviously needed to maintain a safe ecosystem but an integrated view should also be present in the mindset of policy-making. Therefore, the effects of seabed mining must be scientifically established and included in all policy-making. Striking the right balance between the need to preserve the seas and their economic sustainability is crucial if there are to be benefits for research, economic stakeholders and society in general.
- 4.10 Any analysis of the blue economy is weakened if there is not sufficient attention given to the decline of traditional blue economies such as small fishing communities, shipping and tourism. Also to be noted are the effects of the EU's declining budget in this sector.
- 4.11 The ability of the traditional sectors to contribute to increased employment must not be undermined. In aquaculture, the EU is still not self-sufficient in supplying the demand for fish. In the shipbuilding industry, the potential to increase employment is also huge. The need to modernise port infrastructure, if tackled, will also significantly increase employment opportunities.
- 4.12 Some Member States' innovation strategies already support the idea of sustainability and "the ocean as a national priority". For example, the Portuguese "National strategy for research and innovation for smart specialisation 2014-2020" features the correct use of eco-efficient maritime transport in a maritime space without borders to better explore the navy industry and its integration into the ports logistic, aligned with the global logistic. This shows us the commitment of the Member States here, and the importance of the "blue economy" and of Europe's leadership on the matter.
- 4.13 The EESC believes that islands within Europe have a specific role to play in the blue economy, in all three areas identified as areas of innovation for the sector but even more specifically in ocean energy. For this reason, the EESC urges the Commission to also give specific focus to islands in Europe within the realm of this communication, not only for the particular effect the blue economy will have on these areas but also because of the contribution they can make to innovation.

Brussels, 15 October 2014.

The president
of the
European Economic and Social Committee

Henri Malosse
