

When did we Start Talking about Blue Growth in Europe? Why?

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Received date: September 29, 2014; Accepted date: September 30, 2014; Published date: October 8, 2014

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Editorial

Bearing in mind that human pressures are increasing everywhere in the world and also onto our marine environment [1], that land and freshwater are finite resources and that there is a need to continue delivering human necessities such as food and energy to future generations, the economic development strategy of the last centuries has drifted to look at how the 71% of the Earth (water) can provide such necessities, and be a source of innovations and growth, as well as meet existing environmental targets.

If we count all economic activities that depend on the sea, then the blue economy represents 5.4 million jobs and a gross added value of just under €500 billion per year (solely in Europe) according to the European (EU) Commission [2] or is estimated to account between 1.2- 4.2% of the GDP of countries like Australia, Canada, New Zealand, USA, France or UK (Table 3) [3].

Despite we tend to think that only coast and sea close countries might benefit from this development (as much of this activity is concentrated around our world's coasts), we should not forget that some landlocked countries do also host very successful manufacturing industries of marine equipment activities, including design, technology development, manufacture, finance, construction, assembly and testing, as well as various upstream and downstream activities that are also important part of this marine economic value chain. Surís-Regueiro highlighted the various difficulties that exist when quantifying the total value of marine economics depending on which sectors are to be included in the analysis [4].

Furthermore, in the context of Global and Climate Change that our world is experiencing, the need to reduce greenhouse gas emissions, seeking for renewable options with lower emissions per tonne-kilometre has also provided a further impetus for offshore energy installations, also favouring seaborne transport over land transport.

And, it is in this context that developer's eyes are now turned towards our coasts, seas and oceans aiming to harness the untapped potential of Europe's oceans, seas and coasts for jobs and growth [2].

The terms 'Sustainable Marine Growth' and 'Blue Economy' started gaining importance even throughout the preparatory process for Rio +20 where many coastal and small island countries (i.e. the Alliance of Small Island States (AOSIS) and the Pacific Small Island Developing States) questioned the focus of the 'Green Economy' and its applicability to them and requested a preparatory process for a 'Blue Economy' approach [5]. Since then, there was a growing appreciation that the world's Oceans and Seas required more in depth attention and coordinated action which lead to various initiatives (i.e. Global Ocean Commission or the Global Partnership for Oceans).

At EU level, these terms were then turned into what is nowadays called the 'Blue Growth Strategy' with 'Blue Growth' being defined as a sustainable growth based on marine resources which will place the blue economy firmly on the agenda of EU Member States, regions, enterprise and civil society [2].

Furthermore, this Strategy falls within the purpose of the 'Europe 2020 Strategy' which aims addressing the shortcomings of our growth model and creating the conditions for a smart, sustainable and inclusive growth as well as within the EU Commission's 'Integrated Maritime Policy-Blue Book' and the marine and maritime agenda stated at the past 'Limassol Declaration' [6-9].

Deepening Understanding of the Potential of Blue Growth

Recognizing the value of certain areas such as tourism, aquaculture, energy, etc., main focus areas of the Blue Growth Strategy involve: Blue Energy [10]; Aquaculture [11]; Maritime, coastal and cruise tourism [12]; Marine mineral resources and Blue biotechnology [13,14].

Blue Energy: Our seas and oceans have the potential to become important sources of clean energy [10]. Marine renewable energy, which includes both offshore wind and ocean energy, presents the EU with an opportunity to generate economic growth and jobs, enhance the security of its energy supply and boost competitiveness through technological innovation, contributing also to Europe's decarbonisation goals. In January 2014, the EU Commission presented the new 'Blue Energy- Action Plan for Ocean Energy', which consists of 2 phases (2014-2016; 2017-2020) and the creation of a strategic roadmap.

Aquaculture: Aquaculture has the potential to contribute to the overall objective of filling the gap between EU consumption and production of seafood in a way that is environmentally, socially and economically sustainable [11]. In April 2013, the EU Commission presents their 'Strategic Guidelines for the sustainable development of EU aquaculture', which aims to assist Member States in defining their targets and goals, engaging all relevant stakeholders such as authorities, the industry, retailers, consumer associations as well as representatives from the civil society [11].

Maritime, coastal and cruise tourism: Coastal and maritime tourism includes beach-based and nautical, cruising or boating tourism and are identified at the strategy as one of the key drivers for creating growth and new jobs, particularly at the coastal areas which often suffer from high unemployment. Thus, in February 2014, the EU Commission presented the new 'European strategy to promote Coastal and Maritime Tourism', which recognized the sector's potential and outlined 14 EU actions to help coastal regions and businesses tackle the challenges they face and strengthen the sector's position as a key

driver of Europe's blue economy. Member States, regional authorities and the industry will be central to the design and implementation of the actions.

Marine mineral resources: As stated by EU Commission [13]: 'Raw materials are essential for the sound functioning of the EU's economy and the competitiveness of European industry. Sectors such as the construction, chemicals, automotive, aerospace, machinery and equipment industry, which provide a total value, added of €1,324 billion and employment for some 30 million people, all depend on access to raw materials'. However, despite the political concerns about a looming shortage of critical raw materials in Europe, there has not yet been a wide EU-concerted action to develop marine mineral resources as a strategic activity.

Blue biotechnology: Marine biotech has the potential to address a suite of global challenges such as sustainable food supplies, human health, energy security and environmental remediation [15]. One area where marine biotech may make a critical contribution is the development of new antibiotics as the potential scope for novel chemicals and new patents is enormous [16,17]. Kalogerakis et al. even emphasises the role of environmental biotechnology in exploring, exploiting, monitoring, preserving, protecting and decontaminating the marine environment and proposes 14 ways of how they could be used as early warning systems to foresee marine threats [18].

On the other hand, finding finance to support these new development areas is essential and, in this crisis period (with volatile demand or seasonality), risks are ought to be minimized.

Some actions which aim to lower these risks and help unlock the potential of the blue economy [2] might be: i) Developing competitive maritime clusters (groupings of larger industries, smaller suppliers and educational establishments that reinforce each other through their close proximity); ii) Improving communication, knowledge and technology transfer between sectors, businesses and research institutes (to ensure consistency across current and future projects and stimulate ideas for projects. See the EU Atlantic Strategy and its Action Plan (2014 – 2020); the Galway Statement; EU 'Marine Knowledge 2020' initiative; the 'Common Information Sharing Environment (CISE)'; the Marine Strategy Framework Directive (MSFD), etc.); and iii) Bringing in or leveraging the participation of private sector funding schemes (including those through the European Investment Bank).

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