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Social innovation – A future pathway for Blue growth?

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ABSTRACT

The European Union has launched the Blue growth concept as a strategy for stimulating economic growth in European seas. It is accompanying the core principles of the Green growth paradigm that seek to stimulate smart, sustainable and inclusive growth of economic activities. Focusing on Blue growth, this article examines its adequacy to enable social innovation as a strategy for the use and management of marine resources. Social innovation is interpreted as the changing behaviour of a group of actors joined in a network, leading to new and improved ways of collaborative action within the group and beyond. Social innovation can contribute to changing behaviour across different institutional settings, across markets and public sectors, and to enhancing bottom-up responsible inventiveness towards integration of social, economic and environmental objectives. Based on case-study research it is concluded that, to secure long-term sustainable development over short-term benefits, a social innovation perspective in the maritime domain will depend on cooperation, inclusiveness and trust.

1. Introduction[1]

The European Union has launched the Blue growth concept as a strategy for economic growth in European seas in the context of climate change, increased scarcity of natural resources, the increased vulnerability of the planet, growth in urbanization and the concentration of humans in coastal regions [1]. Blue growth is an extension of the land based policy strategy referred to as Green growth, which the EU has introduced in 2010. In response to economic challenges, in the context of climate change and overexploitation of natural resources, the principles of Green growth [2] as a policy strategy aim at: 1) smart growth – developing an economy based on knowledge and innovation, 2) sustainable growth – promoting a more resource efficient, greener and more competitive economy and 3) inclusive growth – fostering a high-employment economy delivering economic, social and territorial cohesion. Likewise, the Blue growth concept operates in the scope of smart, sustainable and inclusive growth, while actually intending to capture a precautionary approach, which refers to "principles that preventive action should be taken, that environmental damage should, as a priority, be rectified at source and that the polluter should pay" ([3] p. 22).

The Blue growth strategy is however dominated by promises of technological progress, of technology innovations that contribute to economic progress, whilst securing sustainable management of natural, marine resources. Underestimating the importance of the social dimension of change, the strategy is likely to become a simple technology-oriented approach. Experiences in natural resource management show that such an approach will not sustain in the long run [4].

Still, it is unclear how the seemingly opposite ambitions of Blue growth can be integrated in practice. This is further complicated by social and institutional barriers to these new developments, such as laws and regulations or earlier (bad) experiences with innovation. A core challenge to innovations is to facilitate change, given existing institutions and sensitivities of the marine ecosystems.

Against this background, this article is aiming at examining the usefulness of the concept 'social innovation' for the Blue growth strategy. The examination refers to; on the one hand, a theoretical discussion about the two terms 'Blue growth' and 'social innovation', and on the other hand, an empirical case in which mussel producers are interviewed in the Dutch North Sea to address possible barriers to social innovation within the scope of Blue growth.

This article first provides a discussion of potential links between principles of Blue growth and social innovation in theory (Section 2), which is followed by a briefing of the empirical case, in which critical factors for social innovation in practice are addressed (Section 3). At last, a discussion and concluding remarks are provided with further recommendation for follow-up research topics (Section 4).

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2. Blue growth and social innovation

In this section the core reasoning behind the Blue growth concept is explored some further, and a link is made with the social innovation concept, which is defined and explained. At the end of this section the two concepts are brought together.

2.1. Blue growth

The Blue growth concept is strategic because it turns a negative approach of natural degradation and climate change into a positive one, to attract new ideas and opportunities with potentially low impacts on the environment [5]. It is a strategy forwarding the core principles of Green growth by means of harnessing 'the untapped potential of Europe's oceans, seas and coasts for jobs and growth', based on the idea that 'we are increasingly aware that land and fresh water are finite resources' [6]. In attempts to encourage Blue growth, new legislation were adopted in 2014, by the so-called Maritime Spatial Planning Directive (MSPD) [7,8]. This directive is accommodating other EU directives and communications, such as the Marine Strategy Framework Directive (MSFD) [3] and the Integrated Framework Policy (IMP) [9]. The Blue growth concept particularly refers to the energy, aquaculture, tourism, mining and biotechnology sectors in the offshore marine and coastal environment [6]. Innovations in these sectors are welcomed as contributions to increase employment and economic growth in environmental friendly manners, referred to as so-called 'eco-innovations' [10]. In a global context, FAO promotes Blue growth as: "a cohesive approach for environmentally compatible integrated and socio-economic sensitive management of aquatic resources including marine, freshwater and brackish water environment" ([11], p. 552). To the core of these developments is thus the use of environmentally friendly technologies that can develop products with lower impacts on the environment.

In order to clarify the core principles of Blue growth, the Green growth principles must be explored some further. Analytically, different interpretations of Green growth build on different traditional economic schools [5]. This includes a long term macro-economic perspective along the Keynesian focus on possibilities for the government to influence by means of spending on social- and environmental capital (e.g. [12]), and a micro-economic perspective following a Pigouvian perspective concentrating on market externalities and market failures; analysing how governmental interventions in terms of tax and subsidies may influence these (e.g. [13]). Another perspective is directly linked to resource scarcity [14]. Referring to the American Henry George (1839–1897), who was one of the earliest writers demarcating the Malthusian concerns about risks for running out of natural resources given population growth, this perspective insists that these risks can be dealt with by the possibilities for increased effectiveness of natural resource exploitation; by adapting production strategies and applying new technological development. Moreover, the Georgian perspective encourages reduced risks by a strategic shift to alternative products and production techniques before the resources become scarce [5]. As such, Green growth consolidates recycling of goods by means of eco-innovations, which eventually evolve into integrated value creation and resource use in circular economy reasoning [15]. This reasoning of Green growth also applies to Blue growth.

2.2. Social innovation

The Blue growth strategy clearly has a strong background in economic theory. However, Blue growth not only refers to economic optimisation, or more effective use of resources [13], it also refers to creation of change in the context of existing social relations. The idea is that vulnerabilities of the marine ecosystem can benefit by adaptations of norms, values and behaviour as integrative parts of the economy [16]. Blue growth encompasses public interventions by multi-actors; such as government, NGOs and citizens, among others. 'Interactions between public and/or private entities aiming at the realization of collective goals' [17] – *not limited to governmental actors* – is deemed necessary for creating societal change [18]; including Blue growth.

Social innovation transpires as a relevant concept to explore social and governance aspects of Blue growth. In the literature the theoretical term social innovation is extensively explored (e.g. [19–23]). Although it is unclear whether the Blue growth concept is tailored to social innovations, there are some remarkable links between them. Whereas social innovation stems from bottom-up initiatives that promote change by so-called enablers, they are aiming for impacts beyond individual level, to a broader scope of social and/or ecological contexts [20–22].

Social innovation has been defined as "changes of attitudes, behaviour or perceptions of a group of people joined in a network of aligned interests that, in relation to the group's horizon of experiences, lead to new and improved ways of collaborative action within the group and beyond" ([22] p. 2). Social innovation can be explained both as process and outcome, which are strongly interwoven [21]. As process it refers to the interaction among actors through phases of problematization, expression of interest, and delineation and co-ordination [22]. Throughout the process, social innovation fully depends on acting at individual level, when enablers perform to realize change by means of network interactions and activities [20–22]. As outcome social innovation develops new institutional structures, for instance network structures, that can deal with the particular needs for change to realize intended societal impacts. Institutional impacts of social innovation can be assessed by means of three core characteristics [21]:

- Scale, referring to the directly and indirectly affected number of people,
- Scope, referring to the level of change towards new institutional settings, and
- Resonance, referring to the peoples imagination and belief in what is possible.

Baker and Mehmood [21] elaborate on social innovation; focusing on ways of collaborative action they argue that any action will have an impact on its surroundings. Not only will institutional settings in terms of scale, scope and resonance be impacted, but also the environment, including marine space with its ecosystems. They insist that long term well-being is context dependent, and contexts consist of both built and natural environments. The link between social life and ecological conditions is considered a core cause to the present environmental crisis [21]. Social innovation, i.e. the collaborative action within a group and beyond, can shape the ecological conditions in practice, because these actions can in one way or the other impact ecological systems, such as use of marine resources. Actually, social innovation depends on contextual social, environmental and economic resources [21]. In this sense, social innovation relates with the core dimensions of sustainability, covering economic, social and the ecological aspects. As such, social innovation reinforces three societal functions [21]:

- Basic individual and collective needs,
- Social relations and relations with ecosystems, and
- Social-economic capabilities to influence social innovation.

Social innovation agitates against business innovation approaches building solely on profit maximization as a core motivation [23]. Social innovation as such does not only refer to invented new ideas and products, but encompasses processes which encourage creativity of inventing, supporting and implementing novel social and ecological solutions to public needs [24]. In brief, the social innovation concept thus has an acting component that consists of people with particular *attitudes and perceptions* about what innovation is, aiming for more societal impacts than making profit as such, with whom acting involves *learning, networking and collaboration*. Social innovation also has an impact