Bulletin of the *Transilvania* University of Braşov
Series VII: Social Sciences • Law • Vol. 14(63) Special Issue
https://doi.org/10.31926/but.ssl.2021.14.63.3.3

FROM GREEN GROWTH TO BLUE GROWTH IN THE 2030 AGENDA GOALS

F. de CARVALHO FIGUEIREDO[1] **C.M. SALCĂ ROTARU [2]**

Abstract: *Economic growth is linked to the development and use of natural resources. With the emergence of the idea of sustainable development, the idea of green economy or bioeconomy is born, based on better management of natural resources, through the use of environmentally friendly economic instruments. The new objectives of sustainable development are related to both water protection and responsible consumption and production. This makes the transition from the green economy to the blue bioeconomy. This article examines the link between the blue bioeconomy and the goals of sustainable development in the light of new environmental policies and regulations. The conclusions are that the blue bioeconomy, complementing the green economy, can ensure the decoupling of economic development from the intensive use of non-renewable resources and that together they can lead to a better achievement of sustainable development goals*

Key words: *sustainable development objectives, green growth, blue growth, Agenda 2030, economic development*

1. Introduction

The concept of blue growth has roots that can be traced back to the conceptualization of sustainable development (SD) (Eikeset & al., 2018). Blue growth, as stated in the literature, "is an extension of the land-based policy strategy referred to as Green growth, which the EU has introduced in 2010" (Soma & al., 2018).

In 2012, the Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions, entitled "*Blue growth": opportunities for sustainable growth in the marine and maritime field*, points out that, in addition to the traditional role of the sea and coastal areas, three new factors (rapid technological advances in offshore activity in deeper and deeper waters; examination of the ways in which the ocean can provide the elements necessary for human life in a more sustainable way; the need to reduce greenhouse gas emissions and to expand offshore renewable energy production facilities) have led to the opportunity

[1] University Centre Una – MG (Centro Universitario Una) Brasil, frederico_miarelli@hotmail.com.
[2] *Transilvania* University of Braşov, rotaruc@unitbv.ro, corresponding author

for the blue growth (Communication, 2012).

Although not all member states of the European Union have direct access to seas and oceans, for the new vision of Blue Growth, lakes and rivers play a key role in most countries (Opinion EESC, 2020). The European Union's 2012 vision of Blue Growth as "an initiative aimed at exploiting Europe's untapped potential for Europe's oceans, seas and coastal areas for growth and employment" (Communication, 2012) has developed, currently offering not only important business opportunities, but also essential solutions for many global sustainable-development goals (Opinion EESC, 2020).

However, the blue economy does not only target the countries of the European Union. The 2030 agenda belongs to the whole world. That is why many states are considering this new trend, this new way of economic development. It is shown that "because the emerging Southern Atlantic Blue Economy is an event of global impact, Brazil is proactive to an expected growing contest for energy and resources in the region" (Duarte, 2015). In the same vein, scientific events are taking place that bring together research institutions, companies and public agencies from various countries to exchanges ideas and experiences on innovation and the Blue Economy (Forum, 2019). Among these, First International Forum on Environment and Blue Economy, organized by Brazilian Secretariat of Environment (Secretaria de Estado de Meio Ambiente - SEMA) and the Institute of Environment and Water Resources (INEMA) in partnership with the Atlantic International Research Centre (AIR Centre), promote Innovation Networks in the Brazilian Northeast, between Brazil, Africa, Europe and the United States of America.

However, most institutional documents on blue growth and blue economy can be found in the legislation and related documents of the European Union. Of these, we mention:

- Programme implementing Horizon Europe – the Framework Programme for Research and Innovation approved in May 2021 by a decision of the European Union (Decision, 2021). Within this programme, the Cluster "*Food, bioeconomy, natural resources, agriculture and environment"*, refers to sustainable blue value-chains, blue innovation including the blue and digital economies, whereas the non-nuclear direct actions of the joint research centre conduct research for sustainable and economically thriving aquaculture and fisheries, and for Blue Growth and the Blue Economy as an important point in the framework of Global Challenges.

- Regulation No 508/2014 on the European Maritime and Fisheries Fund, which, at point 56 of the grounds for adoption, states that "in the fishery and aquaculture sector, community-led local development should encourage innovative approaches to create growth and jobs, in particular by adding value to fishery products and diversifying the local economy towards new economic activities, including those offered by 'blue growth' and the broader maritime sectors" (Regulation, 2014)

- Regulation No 1139/2021 establishing the European Maritime, Fisheries and Aquaculture Fund, which, starting from the idea that "to be sustainable, blue growth depends on innovation and investment in new maritime businesses and in the bio-economy, including sustainable tourism models, ocean-based renewable energy,

innovative high-end shipbuilding and new port services, which can create jobs and at the same time enhance local development" (Regulation, 2021, pc.43), in:

• Appendix II *Areas of cooperation for the geographic programmes, For all geographic regions*, chapter Planet, point 4 Environment and climate change, lett. c) shows that "Developing and/or strengthening sustainable green and blue growth and circular economy in all economic sectors" are targeted, and

• Appendix III, *Areas of intervention for thematic programmes*, point 4. *Areas of intervention for global challenges*, Lett.c) *Prosperity*, point 1. *Sustainable and inclusive growth, decent jobs and private sector engagement*, lett.e), that "promoting an effective policy mix supportive of economic diversification, value addition, and regional integration and sustainable green and blue economy" is of major importance.

Although abrogated at this time, Regulation No 1291/2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020), when it came to unlocking the potential of aquatic living resources, showed that "The aim is to manage, sustainably exploit and maintain aquatic living resources to maximise social and economic benefits/returns from Europe's oceans, seas and inland waters while protecting biodiversity. The activities shall focus on an optimal contribution to secure food supplies by developing sustainable and environmentally friendly fisheries, on sustainable management of ecosystems providing goods and services, on competitive as well as environmentally friendly European aquaculture in the context of the global economy, and on boosting marine and maritime innovation through biotechnology to fuel smart "blue" growth" (Regulation, 2013).

2. Green Growth in Sustainable Development Goals

2.1. Green growth, in brief

Blue Growth is accompanying the core principles of the Green growth paradigm that seek to stimulate smart, sustainable and inclusive growth of economic activities (Soma & al., 2018).

But what is green growth? There is a developed literature that defines the concept of green growth (Hallegatte & al., 2012; Smulders & al., 2014; Stoknes & Rockström, 2018) but also the concept associated with it, the green economy (Loiseau & al., 2016; Georgeson & al., 2017, Kasztelan, 2017) or various green activities or areas (Repanovici at. Al 2021; Polonsky & Rosenberger, 2001; Hsiao & at., 2018). OECD defines Green Growth means fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies (OECD, 2015). UNEP defines green economy "as low carbon, resource efficient and socially inclusive. In a green economy, growth in employment and income are driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services" (UNEP, 2021a). A study of these documents makes it clear that the implementation of a green economy is part of Green growth.

2.2. Sustainable development goals associated with green growth

The literature presents the links between green growth and sustainable development (Lavrinenko & al., 2019; Mikhno & al., 2021). According to UNEP, green growth, through the green economy, is associated with five of the goals of sustainable development, which are (UNEP, 2021b):

- SDG 1 – *No poverty* – showing that "a sustainably managed environment is a prerequisite for socio-economic development and poverty reduction. The natural environment supplies ecosystem goods and services that provide income, support job creation, poverty alleviation, contribute to safety nets and reduce inequity."
- SDG 8 – *Decent Work and Economic Growth* - which "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all". It is already known that the environment is an important resource for the economy, with the natural environment playing an important role in supporting economic activities; therefore, environmental conservation is essential for sustainable economic growth.
- SDG 9 – *Industry, innovation and infrastructure* – since "constructing new greener infrastructures, retrofitting or reconfiguring existing infrastructure systems and exploiting the potential of smart technologies can greatly contribute to the reduction of environmental impacts and disaster risks as well as the construction of resilience and the increase of efficiency in the use of natural resources".
- SDG 11 – *Sustainable cities and communities* – as there is a strong link between the use and the management of natural resources within them, with current trends of concentration of the population and their activities and, inherently, of increasing pressures on the environment. Therefore, it is necessary to develop communities / cities or to make the existing ones efficient in terms of resources and lower impact on the environment.
- SDG 12 – *Sustainable consumption and production* – since "one of the greatest global challenges is to integrate environmental sustainability with economic growth and welfare by decoupling environmental degradation from economic growth and doing more with less. Resource decoupling and impact decoupling are needed to promote sustainable consumption and production patterns and to make the transition towards a greener and more socially inclusive global economy."

3. About Blue Growth

It is already known that the development of coastal areas, even in the form of mass tourism, has led to overexploitation and pollution of these areas. This mode of development is a serious challenge in the coastal areas of the European Union and not only, which areas are most affected by these stressors. Although it is necessary to find solutions specifically adapted to different environments and regions, blue growth can be the common point of these solutions.

Definitions found in the literature on Blue growth are centred around its component elements: blue economy (Koundouri & Giannouli, 2015; Golden & al., 2017; Bennett & al., 2019; Katila & al., 2019), the specific resource which it addresses (Eiseket & al., 2018; Babesgaard, 2018; Mulazzani & Malorgio, 2017). However, we also find statements by

some authors (Caswell & al., 2020) according to whom, although the concept is promoted as a new one, there are historical analogies that can prove the implementation of this concept at least 40 years ago, going back as far as 800 years ago.

Therefore, we can say that the link between blue growth and the current sustainable development goals of the 2030 Agenda finds its origins in environmentally friendly human actions, prior to any need for sustainable development.

3.1. Sustainable development goals associated with Blue growth

The literature links Blue Growth to SDGs (Islam & Shamsuddoha, 2018; Lee & al., 2020; Yarkina & Logulova, 2021), but it also proposes a better mapping of this one in the context of environmental protection (Lee & al., 2021). If the green economy is associated with the sustainable development goals of the 2030 Agenda, some of them can also be associated with the blue economy. Also according to UNEP, the following objectives can be associated with the blue economy: SDG 2 – *Zero hunger*; SDG 3 – *Good health and well-being*; SDG 6 - *Clean water and sanitation;* SDG 7 – *Affordable and clean energy*; SDG 8 - *Decent Work and Economic Growth* and SDG 14 – *Life below water*.

These objectives overlap because:

- better management of the exploitation of marine resources, both classic (fish) and newer, that is, recently entered into the economic target (algae), can ensure an accessible and decent food source. In addition, algae are a largely untapped resource that can be used – with a limited carbon and environmental imprint – to produce food, feed, pharmaceuticals, bioplastics, fertilizers and biofuels (EU Initiative, 2020).
- in order to have a quality renewable resource, care must be taken to maintain clean, quality water, which in turn ensures better health and well-being. One of the targets of SDG 6 is to improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally (2030 Agenda).
- all major sectors have potential to contribute to the Blue Economy, special in: off-shore renewable energy, decarbonised shipping, climate-resilient ports, marine non-living resources, circular economy and pollution prevention including plastics in manufacturing and services, and sustainable marine food production and processing.
- The new sectoral strategies highlight the central role of the blue economy as a key driver for the sustainable development of the EU and the planet and for mitigating the effects of climate change.

4. Conclusions

Blue growth is closely related to green growth, both of which determine a special type of economy - green economy and blue economy - and contribute to achieving the SDGs. If green growth envisages economic growth and the use of terrestrial resources, blue growth focuses on the use of the natural resource - water and of the biological resources related to this living environment. The common points of these two types of growth in terms of SDGs, even if they are not obvious due to the specific resource used,

complement each other and connect because:

- both can lead to the eradication of poverty (SDG 1) by ensuring decent jobs (SDG 8) and together with the correct use of resources can ensure the achievement of the SDG 2 -no hunger.
- even if blue growth specifically targeted at SDG 6 - *Clean water and sanitation* which can also ensure the achievement of SDG 3 – *Good health and well-being*, green growth also envisages through SDG 9 – *Industry, innovation and infrastructure* the achievement of *SDG 12* - reduction of environmental impacts, increase of efficiency in the use of natural resources and decoupling environmental degradation from economic growth, which have a direct effect on water quality.
- by implementing new technologies, both blue growth and green growth help to achieve SDG 7 – *Affordable and clean energy*.

However, we must not forget that the blue growth must also be green.

References

2030 Agenda. Transforming our world: the 2030 Agenda for Sustainable Development, https://sdgs.un.org/2030agenda

Barbesgaard, M. (2018). Blue growth: savior or ocean grabbing?. The Journal of Peasant Studies, 45(1), 130-149.

Bennett, N. J., Cisneros-Montemayor, A. M., Blythe, J., Silver, J. J., Singh, G., Andrews, N., ... & Sumaila, U. R. (2019). Towards a sustainable and equitable blue economy. Nature Sustainability, 2(11), 991-993.

Caswell, B. A., Klein, E. S., Alleway, H. K., Ball, J. E., Botero, J., Cardinale, M., ... & Thurstan, R. H. (2020). Something old, something new: historical perspectives provide lessons for blue growth agendas. Fish and Fisheries, 21(4), 774-796.

Communication, 2012, Communication from the Commission to the European Parliament, the Council, the Economic and social Committee and the Committee of the Regions "Blue growth": opportunities for sustainable growth in the marine and maritime field https://eur-lex.europa.eu/legal-content/RO/TXT/PDF/?uri=CELEX:52012DC0494&qid=1634554315810&from=RO

Decision (2021). Council Decision (EU) 2021/764 of 10 May 2021 establishing the Specific Programme implementing Horizon Europe – the Framework Programme for Research and Innovation, and repealing Decision 2013/743/EU, OJ L 167I, 12.5.2021, p. 1–80, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021D0764&qid=1634580009106

Duarte, É. (2015). Brazil, the Blue Economy and the maritime security of theSouth Atlantic, Journal of the Indian Ocean Region, DOI: 10.1080/19480881.2015.1067384To link to this article: http://dx.doi.org/10.1080/19480881.2015.1067384 Available from: https://www.researchgate.net/publication/281571297_Brazil_the_Blue_Economy_and_the_maritime_security_of_the_South_Atlantic [accessed Oct 18 2021].

Eikeset, A. M., Mazzarella, A. B., Davíðsdóttir, B., Klinger, D. H., Levin, S. A., Rovenskaya, E., & Stenseth, N. C. (2018). What is blue growth? The semantics of "Sustainable

Development" of marine environments. Marine Policy, 87, 177-179. https://doi.org/10.1016/j.marpol.2017.10.019.

EU Initiative. (2020) Blue bioeconomy - towards a strong and sustainable European algae sector. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12780-Bioeconomia-albastra-catre-un-sector-european-al-algelor-puternic-si-durabil_ro

Forum. (2019). First International Forum on Environment and Blue Economy: Promoting Innovation Networks in the Brazilian Northeast. https://allatlanticocean.org/view/events/i-international-forum-on-environment-and-blue-economy-promoting-innovation-networks-in-the-brazilian-northeast

Georgeson, L., Maslin, M., & Poessinouw, M. (2017). The global green economy: a review of concepts, definitions, measurement methodologies and their interactions. *Geo: Geography and Environment*, *4*(1), e00036.

Golden, J. S., Virdin, J., Nowacek, D., Halpin, P., Bennear, L., & Patil, P. G. (2017). "Making sure the blue economy is green." Nature – Ecology & Evolution, 1, Article 17. DOI: 10.1038/s41559-016-0017. Retrieved from http://www.nature.com/articles/s41559- 016-0017

Hallegatte, S., Heal, G., Fay, M., & Treguer, D. (2012). *From growth to green growth-a framework* (No. w17841). National Bureau of Economic Research.

Hsiao, T. Y., Chuang, C. M., & Huang, L. (2018). The contents, determinants, and strategic procedure for implementing suitable green activities in star hotels. *International Journal of Hospitality Management*, *69*, 1-13.

Islam, M. M., & Shamsuddoha, M. D. (2018). Coastal and marine conservation strategy for Bangladesh in the context of achieving blue growth and sustainable development goals (SDGs). *Environmental science & policy*, *87*, 45-54.

Kasztelan, A. (2017). Green growth, green economy and sustainable development: terminological and relational discourse. *Prague Economic Papers*, *26*(4), 487-499.

Katila, J., Ala-Rämi, K., Repka, S., Rendon, E., & Törrönen, J. (2019). Defining and quantifying the sea-based economy to support regional blue growth strategies–Case Gulf of Bothnia. *Marine Policy*, *100*, 215-225.

Koundouri, P., & Giannouli, A. (2015). Blue growth and economics. *Frontiers in Marine Science*, *2*, 94.

Lavrinenko, O., Ignatjeva, S., Ohotina, A., Rybalkin, O., & Lazdans, D. (2019). The role of green economy in sustainable development (case study: the EU states). *Entrepreneurship and Sustainability Issues*, *6*(3), 1113.

Lee, K. H., Noh, J., & Khim, J. S. (2020). The Blue Economy and the United Nations' sustainable development goals: Challenges and opportunities. *Environment international*, *137*, 105528.

Lee, K. H., Noh, J., Lee, J., & Khim, J. S. (2021). Blue economy and the total environment: Mapping the interface. *Environment International*, *157*, 106796.

Loiseau, E., Saikku, L., Antikainen, R., Droste, N., Hansjürgens, B., Pitkänen, K., ... & Thomsen, M. (2016). Green economy and related concepts: An overview. *Journal of cleaner production*, *139*, 361-371.

Mikhno, I., Koval, V., Shvets, G., Garmatiuk, O., & Tamošiūnienė, R. (2021). Green economy in sustainable development and improvement of resource efficiency. *Central*

European Business Review (CEBR), *10*(1), 99-113.

Mulazzani, L., & Malorgio, G. (2017). Blue growth and ecosystem services. *Marine Policy*, *85*, 17-24.

OECD. (2015). *Towards Green Growth?: Traking Progress*, OECD Green Growth Studies, OECD Publishing Paris, https://dx.doi.org/10.1787/9789264234437-en

Opinion EESC. (2020). Opinion of the European Economic and Social Committee on 'Blue bio-economy' (exploratory opinion), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019AE1573&from=RO

Polonsky, M. J., & Rosenberger III, P. J. (2001). Reevaluating green marketing: a strategic approach. *Business horizons*, *44*(5), 21-30.

Regulation. (2013). Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC, OJ L 347, 20.12.2013, p. 104–173, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32013R1291&qid=1634580009106

Regulation. (2014). Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund and repealing Council Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council, OJ L 149, 20.5.2014, p. 1–66, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014R0508&qid=1634580009106

Regulation. (2021). Regulation (EU) 2021/1139 of the European Parliament and of the Council of 7 July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund and amending Regulation (EU) 2017/1004, *OJ L 247, 13.7.2021, p. 1–49, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1139&qid=1634580009106*

Repanovici, A., Salcă Rotaru, C.S., Murzea, C., (2021). Development of Sustainable Thinking by Information Literacy. Sustainability 2021, 13, 1287. https://doi.org/10.3390/su13031287 (4)

Soma, K., van den Burg, S. W., Hoefnagel, E. W., Stuiver, M., & van der Heide, C. M. (2018). Social innovation–A future pathway for Blue growth?. Marine Policy, 87, 363-370.

Smulders, S., Toman, M., & Withagen, C. (2014). Growth theory and 'green growth'. *Oxford review of economic policy*, *30*(3), 423-446.

Stoknes, P. E., & Rockström, J. (2018). Redefining green growth within planetary boundaries. *Energy Research & Social Science*, *44*, 41-49.

UNEP. (2021a). https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-economy

UNEP. (2021b). https://www.unep.org/explore-topics/green-economy/why-does-green-economy-matter

Yarkina N., & Logunova, N. (2021). The concept "blue growth" as a way for sustainable development of the fisheries. E3S Web of Conferences 244, 03021 (2021). https://doi.org/10.1051/e3sconf/202124403021