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Review Article

## Blue economy: The past and present from the world and future directions for Thailand

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### Abstract

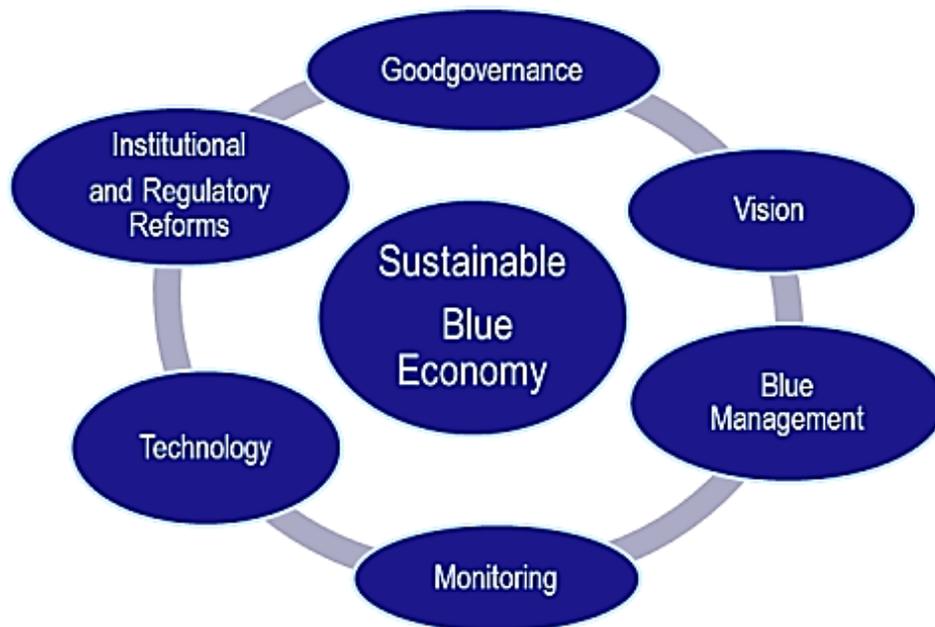
This commentary article aims to summarize the past and present research of the blue economy from developing and developed nations and anticipates future research directions in the domain of blue economy policy research for Thailand. The importance of environmental protection, economic distribution, and social equality in the past were discussed and the present research shifted to addressing the complexity and defining the all-inclusive blue economy and all-inclusive participation, multiple stakeholder involvement and inter-regional cooperation, and global partnerships for knowledge and technology exchange. New blue economy sectors, such as ‘bioprospecting’, are also emerging in the present. However, the core concepts, such as defining ‘Blue Economy’, ‘Overfishing’, and ‘sustainable growth’, are still under debate. There is a perceptual disagreement among stakeholders in developing countries. Future directions in this research domain are also presented. This study concludes that future blue economy policies, plans, and implementation related research on blue economy must take account of environmental regulations and all-inclusive economic developmental plans that are measurable in terms of economic, environmental, and socio-cultural sustainability.

### 1. Introduction

The history of merchant shipping for the international seaborne trade of key commodities, such as cotton, silk, spices, herbs, and even trade crops such as rice and beans (Castillo et al., 2016), and marine-based resources such as precious pearls and seashells, between the present ASEAN region and the world, are well-documented (Hultzsich, 1913; Jacq-Hergoualch et al., 1998). However, the recorded history of Thai maritime trade can be dated back to the Sukhothai period of the 12<sup>th</sup> Century (Krailassuwan, 2019). Since then, the marine environment has been a stimulus for the growth of the national economy. However, marine-based activities began to take shape very much in the 21<sup>st</sup> century in the areas of the economy, policies, and cooperation between people and the private and public sectors. Also, the conceptualization of the “Blue Economy”/“Ocean Economy” is relatively new, and can be traced back to the sustainable development conference held by the United Nations in 2012 in Rio de Janeiro (Silver et al., 2015b; Smith-Godfrey, 2016). The results of the meeting raised awareness about poverty alleviation and the need for work in tandem for the conservation of the green economy for sustainability and presented the subject of “blue

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economy” for countries with coastal boundaries. The presentation was a significant force for change, thus paving the way for developing policies in many countries by focusing on the well-being of the country's population and the conservation of coastal and marine resources and the environment.



**Figure 1** Six pillars of the blue economy.  
Source: Attri (2016)

Thus, today, the concept of “blue economy” is more than just an economic engine; it also includes environmental protection, the conservation of national resources, and improving the livelihoods of coastal communities. Also, the sectors of “blue economy”, such as “blue tourism” (Sharafuddin & Madhavan, 2020b), fisheries, and aquaculture are predicted to be supporting sectors for a green recovery from the Coronavirus pandemic (Loonela & Soumillion, 2020). In the future, “blue economy” can create enormous value for countries with coastal and marine environments, because the European Union plans to achieve 35 % of its energy production from marine regions by 2050. It is also a vital source for reducing the co2 emission, thus supporting achievement of the United Nations 2030 Agenda of Sustainable Development Goals (World Bank, 2017). The Union Government of India included “blue economy” as one of the ten core dimensions for the economic development of the nation. The development of SDS-SEA (Sustainable Development Strategy for the Seas of East Asia) by PEMSEA (Partnerships in Environmental Management for the Seas of East Asia), ASEAN PMC (post-ministerial conference) 2020 (Ebarvia, 2016; Gonzales et al., 2019) are some of the noticeable policies and frameworks being shaped for better governance of blue economy in the ASEAN region. However, there is limited research published in the field of blue economy in Thailand. For example: Harakunarak (2016) summarized the marine-based activities in Thailand and addressed the way forward for Thailand’s blue economy from the Bay of Bengal context. The author emphasized the importance of mangroves in the blue economy. In another study, conducted by Pauly (2018), the author mentioned the multi-perspective, multi-sector specific definitions of blue economy and adopted the UNEP (2013) definition, i.e., “the blue economy improves human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”, and criticized Thailand from the European theory of fishing, which emphasized rational exploitation of marine stocks. The author's concern was that Thailand failed to initiate self-sustained development in the fishing sector. Another important study is that of Attri

(2016), which clearly mentioned the pillars of blue economy (**Figure 1**) and highlighted the strengths and weaknesses of Thailand's blue economy. To the best of the author's knowledge, beyond these studies, there is no other available literature in the English language on Thailand's blue economy. Therefore, it is vital to study the past and present studies of blue economy related research from developed and developing countries to frame research directions for future blue economy research in Thailand.

### 1.1 Objectives

This commentary article aims to study the past and present literature in blue economy research which emphasizes policies and definitions and to answer basic questions like 'defining the blue economy', 'the past and present areas of focus in blue economy policy-related researches', 'blue economy policy implications', 'coastal economic value enhancement', and 'the interrelationship between economic value addition and environmental conservation' from the past and present research done all around the world, and projects future research directions for Thailand in this research domain.

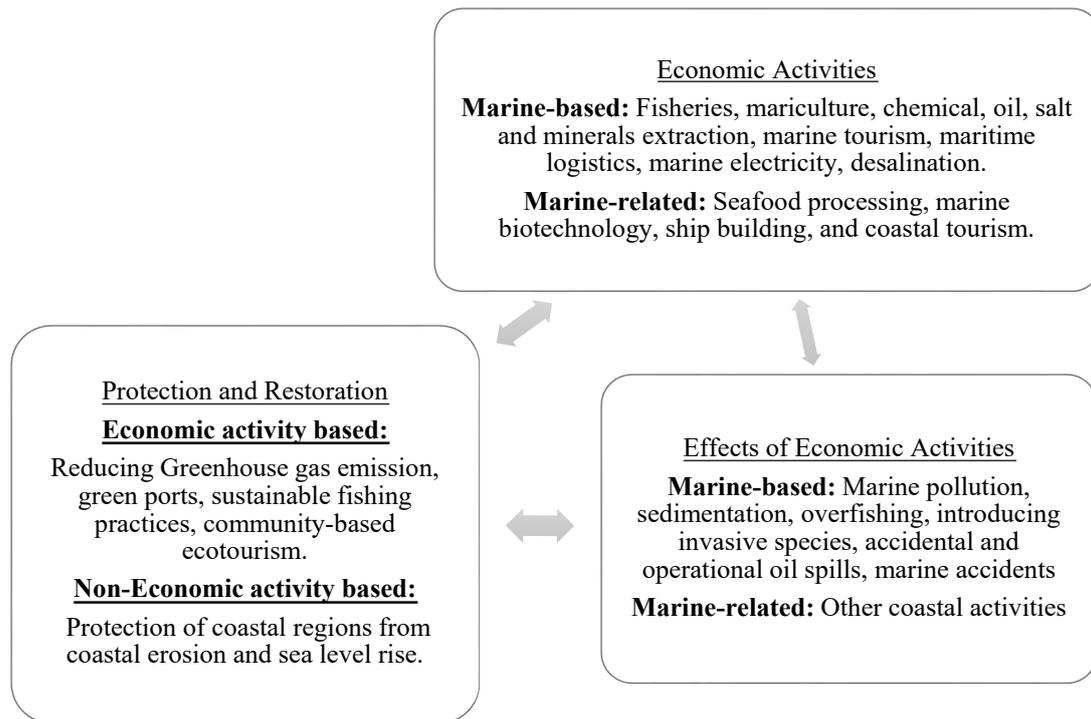
## 2. Literature review

### 2.1 The past of blue economy

The beginning of the past period for blue economy research was set towards the 2012 Rio +20 conference. Thus, articles published since 2013 were taken into account for the literature review. Kathijotes (2013) gave the meaning for the concept of blue economy as a shift of society from scarcity to perfection. The major concern highlighted by the author was the nutritional input into the marine environment through human activities in the coastal regions, and the need for measuring and managing wastewater (drainage, sewage, and aquaculture) discharges.

Van Wyk (2015) viewed the blue economy as a strategic priority for the South African perspective and recommended maritime diplomacy as an essential strategy with neighboring countries while exploring and exploiting marine resources.

Silver et al. (2015) discussed the terminologies and definition of the blue economy. They classified the terms based on four ocean-human relationships: (1) natural capital, (2) good business, (3) being integral to Pacific Small Island Developing States, and (4) small-scale fisheries livelihoods. The authors highlighted the complexity of the stakeholders, problems and solutions, and difficulties in defining the blue economy in a singular way. Pinto et al. (2015) highlighted the lack of attention towards regional development in European "blue economy" policymaking and conducted survey research with a special focus on the issues of social capital, human capital, and innovation. The authors found that innovation is one of the critical factors in determining cooperation within the industry and maritime clusters. They also found that the collaboration and cooperation between and within the clusters of maritime sectors are not the same. This article is one of the good examples of emerging research in defining and classifying maritime clusters, because the authors found that the entities involved in coastal tourism were comparatively less collaborative and cooperative than the other sectors (weak cluster); thus, it was recommended to exclude coastal tourism activities from the core maritime cluster. However, this may not be the case in East Asian countries, where coastal tourism activities are the main lifeline of coastal communities. Lack of data is one of the major challenges in defining a blue economy for APEC countries. Ebarvia (2016) highlighted the lack of data in developing a common framework for Asia-Pacific Economic Cooperation (APEC) countries and emphasized the need for a clear-cut definition and data availability for assessing the Gross Value Added (GVA). The conceptual framework for the activities to define blue economy from the author's conclusion is presented in **Figure 2**.



**Figure 2** Blue Economy Framework (Compiled from Ebarvia (2016)).

Smith-Godfrey (2016) applied qualitative comparative analysis (Ragin, 2018) to develop a simple definition for the blue economy and defined it as “sustainable industrialisation of the oceans to the benefit of all”. The author further applied the value chain approach and identified five marine activities: (1) harvesting of living resources, (2) extraction of non-living resources, (3) new resource generation, (4) trading, and (5) resource health management. The author also concluded for the need for measurable and calculable terms to be included in the blue economy definition. Keen et al. (2018) defined the blue economy using a multiple case study approach from Pacific Ocean Governance. The authors highlighted the vagueness of the current definitions, because the current concept of defining blue economy lacks paying attention to the key components such as power, gender, and agency. Thus, the authors proposed a new five-component framework, with (1) institutional arrangements, (2) technological capability, (3) ecosystem resilience, (4) economic sustainability, and (5) community engagement through the process cycle of agency-power and politics. Pauly (2018) raised concern about the lack of focus in blue economy policies and the non-existence of data from recreational, subsistence, and artisanal fisheries. The author emphasized the need to focus towards small-scale fisheries, because these can be more representative than industrial fisheries for sustainable fisheries. Sarker et al. (2018) identified the potential, economic value, and challenges of Bangladesh’s blue economy, and developed a framework for enhancing the blue growth of Bangladesh. The authors pointed out that the lack of integration among the stakeholders and the need for skilled workforce development and knowledge generation through research are the crucial elements for meeting the sustainable development goals. Hussain et al. (2018) compared the past (before the settlement of Bangladesh’s maritime boundary disputes with India and Myanmar) and present (after settlement of Bangladesh’s maritime boundary disputes with India and Myanmar) and summarized the potential developmental opportunities. The authors highlighted the need for multi-ministerial/multi-sectorial cooperation and coordination between all stakeholders, including public-private-academic-industry, for sustainable development of blue economy. After seven years of research and development, Cohen et al. (2019) addressed the fundamental ideological differences and approaches by the policy makers. The authors argue that social impacts, such as human rights

and interests, can be heard only through the voices of “ocean-users”, i.e., the communities involved in small-scale fisheries and related trade (fisher and traders). Thus, there is a need for prioritizing inputs from ocean-users with social objectives while framing policies for contemporary ocean governance. Wenhai et al. (2019) summarized various definitions of blue economy and stated that 'blue economy is a strategic framework, kind of policy, part of green economy, sustainable marine economy, and marine-based new technology economy'. The authors further defined blue economy as “sustainable productive, service and all other related activities using and protecting coastal and marine resources” and emphasized the need for global blue partnerships, exchange of knowledge, and international communications in blue economy.

**Table 1** Factors of focus of each article in the past.

No.	Author	Factors of Focus
1	Kathijotes (2013)	- Problems that cause environmental problems - Emphasize efficient use of resources
2	van Wyk (2015)	- Economy of the maritime sector - Marine diplomacy - Local resources - Policies and the amendment of overlapping rights in ocean areas
3	Silver et al. (2015a)	- Terminology, the meaning of the blue economy - Natural capital, Good Business, Pacific SIDS, and SSF livelihoods through the criteria, including Problems, Solutions, and Governance Actors
4	Pinto et al. (2015)	- Innovation, Human Capital, and Social Capital - Dynamics of cooperation - Ocean energy, natural resources, exploration, and biotechnology - Restoration of the original industry
5	Ebarvia (2016)	- Coastal Ecosystems, Biodiversity - Impact on GDP - Evaluation of the effectiveness of development policies and plans
6	Smith-Godfrey (2016)	- Definition - Rules - Economic activity structure - Framework of work available from international organizations - Renewable Energy, Ocean Supply Chain, Trade, and Transport
7	Keen et al. (2018)	- Focus on the policy Organizational balance Building stability - The overlap of areas - Relationship of traditions in the area with the ocean
8	Pauly (2018)	- Weight, value, and information of fisheries - Small fisheries and fisheries industry - Fisheries area
9	Sarker et al. (2018)	- Using resources for the most cost-effective and efficient solutions - Trade, commerce and protection from natural disasters - Controlling effective fisheries
10	Hussain et al. (2018)	- Blue Economic Development Opportunities - Limitations in achieving goals - Local sea boundary - Major sectors of the blue economy - Exploitable Marine Resources - Developing a blue economy causing employment
11	Cohen et al. (2019)	- Social impacts on Small Scale Fisheries - Economic reforms along with caring for the society and environment
12	Wenhai et al. (2019)	- National macroeconomic management - Policy framework - Management technology

## 2.2 Summary of past research

The above literature indicates that the past research on “blue economy” focused on redefining the concept, effective governance, policy planning, sustainable economic development, conservation of marine resources, and inclusion of fishing and coastal communities (addressing the social impacts). All marine-based and marine-related industries and related sectors were addressed well by the researchers in the past. However, the core focus of all the research was “all-inclusive sustainability”. The factors of research focus and results are summarized in **Table 1**.

## 2.3 The present of blue economy

The recent studies on “Blue Economy” focus on practicality. However, the issues, links, and complex relationships between Sustainable Development Goals (SDGs), Blue Economy, and stakeholder role are less addressed by researchers in academic research. Lee et al. (2020) did a systematic review of articles published in the past 20 years from 1998-2018 and found 89,450 articles related to ‘blue economy/blue economy (AND/OR) sustainable development goals’ were published in various journals during the period. However, it was found that only 26 articles from 18 journals and 27 articles from 15 journals focused on links, relationships, and issues related to ‘sustainable development goals and blue economy’ and ‘sustainable development goals, blue economy, and stakeholders’, respectively. The authors also found that these researches were relatively new, and the earliest research in this domain was after 2012 (Taylor, 2013). The research findings also reconfirm our previous statement about blue economy research- “The concept of research in blue economy gained its momentum towards all-inclusive sustainability since 2012”. Novaglio et al. (2021) divided the blue economy into three scopes- coastal, offshore (Exclusive Economic Zones) and high seas (outside EEZ) and pointed out that offshore waters will likely be the focus of nations in the upcoming decade. The authors found there was a lack of research articles with a special focus on offshore regions. Thus, the authors examined both challenges and opportunities for the sustainable development of offshore blue economy and identified (1) Expression of social values from the community, user, and national dimensions; (2) Allocation of sufficient funding; (3) Information sharing for cooperation between industries and across nations towards sustainability; and (4) Implementation of international institutional mechanism and legal requirements, such as the UN Declaration on the Rights of Indigenous people, as the four most important required changes for achieving sustainable goals in 2030. Farmery et al. (2021) argued that the current blue economy policies are over-focusing towards profit and production. The authors pointed out three blind spots in blue economy narratives, which are (1) production and consumption, (2) over-focusing toward production, and (3) emphasizing mariculture production, which may disrupt the current practices and challenge the distribution equity. Similarly, research on the flaws of the current blue economy definitions, policies, and practices were also highly criticized. The “blue de-growth”, a keyword conceptualized and phrased by Hadjimichael (2018), is also gaining attention among researchers (Ertör & Hadjimichael, 2020). The discussion of blue de-growth was from different empirical and theoretical lenses; however, the majority of the focus is on environmental and social injustice through the current growth-based blue economy policies and demand for revisions in policies. Community-based eco-tourism (CBET) is considered as one of the potential solutions for alleviating poverty and boosting the local economy and environment through additional sources of income and sustainable practices (Sharafuddin & Madhavan, 2020a). Phelan et al. (2020) examined the role of CBET in supplementing primary and secondary income for coastal communities and found that offering ecosystem services through coastal communities can bridge the gap between maintaining ocean health and community well-being. Satizábal et al. (2020) criticized the economic approach of framing policies, which narrows the alternative social and ecological benefits. The interventions of territorial blue governance on the livelihoods of coastal communities must be addressed. Thus, there is a need for opening up economic and political spaces for coastal communities to defend their interests and needs. Okafor-Yarwood et al. (2020) used

multiple case studies to address the failures of blue economy growth-related project implementations in Africa, demanded for a bottom-up approach in developing blue economy related policies, and proposed a collaborative blue management framework, which includes economic profitability, environmental de(re)gradation, and local community well-being. Andriamahefazafy et al. (2020) addressed the resource sharing issue between industrial fishing and local fisheries. The authors expressed the conceptual differences between the global definition of “overfishing” and local perceptions. Here, the local perception for “overfishing” is about the impacts of industrial fishing and inequality between industrial fishing and small-scale independent fisheries in accessing marine resources (tuna). The authors strongly concluded that the current growth-oriented economic and political interests taint the blue economy initiatives, and achieving sustainability with the current practices will be very challenging. Bogadóttir (2020) also highlighted the rising conflicts between blue growth and environmental justice. However, the article focused on salmon farming and ecological distribution conflicts. Sampaolo et al. (2021) developed and tested the ‘Quadruple Helix’ model in the Qingdao city of Shandong Province in China, which is a blue economic zone, and examined the collaboration between civil society, industries, academia, and government bodies in the context of the blue economy. The author noted that new sectors such as marine bioprospecting, which needs high specialization, has emerged as a new field of study in China's blue economy. Although China is one of the leading forerunners in blue economy related policies and practices, the research highlighted the weak collaboration between the stakeholders, especially the low contribution of residents, the need for a transparent common language, and an increase in communication to reach a convergence in defining blue economy at local, national, and global levels and to make blue economy more participative.

**Table 2** Factors of focus of each article in the present.

No.	Author	Factors of Focus
1	Lee et al. (2020)	- Focus on SDGs - Complexity, variety in relation to SDGs - Conflicts, Stakeholders, Current Approach
2	Novaglio et al. (2020)	- Opportunities, Challenges of the blue economy - Private domination - Prioritization - Self-propelled blue economy
3	Farmery et al. (2020)	- Social inequality - Distribution of benefits - Resources to replace food and nutrition
4	Ertör & Hadjimichael (2020)	- Blue Degrowth
5	Phelan et al. (2020)	- Role of ecotourism - Multilateral support - Important factors for support
6	Satizábal et al. (2020)	- Supportive wind discourse blue economy - Policy for stability - Market access, financial value, blue capital
7	Okafor-Yarwood et al. (2020)	- Involvement of the community in the area - Two importances of the blue economy
8	Andriamahefazafy et al. (2020)	- Ecological fishing - Practices that conflict with reality - Industry role - Government positions and roles
9	Bogadóttir (2020)	- Food security - Industrial avoidance of fish and fishing
10	Sampaolo et al. (2021)	- Multi-stakeholder participation and cooperation

## 2.4 Summary of present research

We found that, in current research, there is a rising concern among the researchers about the rigorous implementation of the blue economy policies and their consequences. The policy blind spots, lack of inclusivity, and conflicts between the policies and reality in terms of sustainability were the growing concerns among researchers in the present. A summary of the reviewed articles, research focus and the results are presented in **Table 2**.

## 2.5 The future of the blue economy

From the past and present studies, we found that framing policies, implementing, and monitoring differs vastly among nations. There is also perceptual disagreement among stakeholders and researchers in various most important key terms, such as overfishing and sustainable growth. Critics highlight the vagueness of the current growth-based ideologies and even propose blue de-growth for sustainability. In addition, in developed countries, long-term futures, such as balancing the sustainable growth between coastal communities, marine ecology, coastal environment, and industrial large-scale commercial activities, are possible. However, this is much more complex, due to socio-political factors and economic interests among stakeholders, in developing and transition nations (Novaglio et al., 2021). In addition, coastal communities are indigenous in nature, and the environment differs significantly all across the world. Thus, each blue economy development needs a place-based, situation-based solution. In addition, coastal, marine, and maritime environments are the biggest tourism segments. “Tourism in the 2030 Agenda” by UNWTO, which is a reflection of UNSDGs, is less addressed in the blue economy related present research due to the current pandemic situation. However, the EU expects the blue recovery to be one of the solutions for post-pandemic growth.

**Table 3** Summary of factors of focus from Past, Present, and Future directions.

Past	Present	Future
<ul style="list-style-type: none"> <li>- Problems related to the environment</li> <li>- Blue economic resource distribution between neighboring countries.</li> <li>- Vocabulary, meaning, understanding of the blue economy</li> <li>- Natural capital</li> <li>- Innovation capital, human capital, social capital</li> <li>- Distribution of benefits for social equality</li> <li>- Ecosystems of ocean, sea, coast</li> <li>- Resource utilization for efficiency and maximum benefit</li> <li>Wind power</li> <li>- Economic structure, policy, regulations, framework for both domestic and international</li> <li>- Area boundary</li> <li>- Opportunities and challenges</li> </ul>	<ul style="list-style-type: none"> <li>- Complexity, Variety, Conflicts, Opportunities, and Challenges</li> <li>- equality</li> <li>- Involvement of the community in the area</li> <li>- Food Security, Nutrition, and the Environment</li> <li>- Impact of natural disasters, global crisis</li> <li>- Industry Roles, State Organization Duty, Government Role</li> </ul>	<ul style="list-style-type: none"> <li>Take into account</li> <li>- the current policies and regulations</li> <li>- Economic development plans</li> <li>- Actual implementation and Economic activities</li> <li>- Sustainability</li> </ul>

**Table 3** shows the factor focus and research results of each article in the past, present, and future.

Consequently, the economic activities in the coastal and marine environment may increase in the near post-pandemic future. Thus, we assume that the lack of uniformity/inclusivity/transparency in data is one of the factors leading to unresolved/delayed environmental justice. Therefore, the next decade of blue economy research in social sciences may be based on data-driven decision making, policy implementation, schemes, impacts, and effectiveness, particularly post-pandemic recovery of the economy in community, regional, and national levels, that will lead to intensified activities in the blue economy sectors. Thus, the debate of growth/de-growth, exploitation/sustainability is expected to continue in the next decade.

### 3. Conclusions

From past research, it is evident that a lot of effort was made by international organizations and countries with coastal borders to resolve border conflicts and develop marine-based economic activities in their Exclusive Economic Zones. Definitely, employment from the blue economy is on the rise. However, overexploitation, sustainability, and threats to the coastal community are growing concerns for the current blue economy policies and frameworks all around the world. Certainly, there are ideological and implementation differences all around the world. The present studies reflect the complexity of implementing the growth-based blue economy policies and their inability to meet the agreed objectives, i.e., sustainability of life below water and inclusiveness of coastal communities. The future blue economy policies and implementation plans must take account of environmental regulations and all-inclusive economic developmental plans and develop economic activities that are measurable in terms of economic, environmental, and socio-cultural sustainability. This study does not adopt any systematic review approach; thus, some of the major research articles published in this domain might have been excluded unintentionally. Also, this research findings are limited to articles published in the English language, and does not include articles published in other languages, especially in the Thai language. This is another major limitation of the study. However, the research achieved its objectives in identifying some of the major definitions, sectors, stakeholders, activities, and factors of focus in this research domain. Thus, suitable research directions are identified for initiating future research in blue economy in Thailand.

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### References

- Andriamahefazafy, M., Bailey, M., Sinan, H., & Kull, C. A. (2020). The paradox of sustainable tuna fisheries in the Western Indian Ocean: Between visions of blue economy and realities of accumulation. *Sustainability Science*, 15(1), 75-89. <https://doi.org/10.1007/s11625-019-00751-3>
- Attri, V. N. (2016). *An emerging new development paradigm of the blue economy in IORA: A policy framework for the future* (pp. 1-10). Chair Indian Ocean Studies, Indian Ocean Rim Association, University of Mauritius, Mauritius.
- Bogadóttir, R. (2020). Blue Growth and its discontents in the Faroe Islands: An island perspective on Blue (De)Growth, sustainability, and environmental justice. *Sustainability Science*, 15(1), 103-115. <https://doi.org/10.1007/s11625-019-00763-z>
- Castillo, C. C., Bellina, B., & Fuller, D. Q. (2016). Rice, beans and trade crops on the early maritime silk route in Southeast Asia. *Antiquity*, 90(353), 1255-1269. <https://doi.org/10.15184/aqy.2016.175>

- Cohen, P. J., Allison, E. H., Andrew, N. L., Cinner, J., Evans, L. S., Fabinyi, M., Garces, L. R., Hall, S. J., Hicks, C. C., Hughes, T. P., Jentoft, S., Mills, D. J., Masu, R., Mbaru, E. K., & Ratner, B. D. (2019). Securing a just space for small-scale fisheries in the blue economy. *Frontiers in Marine Science*, 6(3), 171. <https://doi.org/10.3389/fmars.2019.00171>
- Ebarvia, M. C. M. (2016). Economic assessment of oceans for sustainable blue economy development. *Journal of Ocean and Coastal Economics*, 2(2), 7. <https://doi.org/10.15351/2373-8456.1051>
- Ertör, I., & Hadjimichael, M. (2020). Editorial: Blue de-growth and the politics of the sea: Rethinking the blue economy. *Sustainability Science*, 15(1), 1-10. <https://doi.org/10.1007/s11625-019-00772-y>
- Farmery, A. K., Allison, E. H., Andrew, N. L., Troell, M., Voyer, M., Campbell, B., Eriksson, H., Fabinyi, M., Song, A. M., & Steenbergen, D. (2021). Blind spots in visions of a “blue economy” could undermine the ocean’s contribution to eliminating hunger and malnutrition. *One Earth*, 4(1), 28-38. <https://doi.org/10.1016/j.oneear.2020.12.002>
- Gonzales, A. T., Kelley, E., & Bernad, S. R. Q. (2019). A review of intergovernmental collaboration in ecosystem-based governance of the large marine ecosystems of East Asia. *Deep-Sea Research Part II: Topical Studies in Oceanography*, 163, 108-119. <https://doi.org/10.1016/j.dsr2.2019.05.014>
- Hadjimichael, M. (2018). A call for a blue de-growth: Unravelling the European Union’s fisheries and maritime policies. *Marine Policy*, 94, 158-164. <https://doi.org/10.1016/j.marpol.2018.05.007>
- Harakunarak, A. (2016). *Blue economy: How would mangroves in Thailand further advance and sustain connectivity in the Bay of Bengal Region* (p. 119). In Proceedings of the Cooperative Partnership and Sustainable Development, Dhaka, Bangladesh.
- Hultzsch, E. (1913). XII. Note on a tamil inscription in siam. *Journal of the Royal Asiatic Society of Great Britain & Ireland*, 45(2), 337-339. <https://doi.org/10.1017/S0035869X00044609>
- Hussain, M. G., Failler, P., Karim, A. Al, & Alam, M. K. (2018). Major opportunities of blue economy development in Bangladesh. *Journal of the Indian Ocean Region*, 14(1), 88-89. <https://doi.org/10.1080/19480881.2017.1368250>
- Jacq-Hergoualc’h, M., Supajanya, T., & Krisanapol, W. (1998). A stopping point along the maritime Silk Road. The southern part of the Kra Isthmus during the 9th century. *Journal Asiatique*, 286(1), 235-320. <https://doi.org/10.2143/ja.286.1.556508>
- Kathijotes, N. (2013). Keynote: Blue economy: Environmental and behavioural aspects towards Sustainable coastal development. *Procedia - Social and Behavioral Sciences*, 101, 7-13. <https://doi.org/10.1016/j.sbspro.2013.07.173>
- Keen, M. R., Schwarz, A. M., & Wini-Simeon, L. (2018). Towards defining the Blue economy: Practical lessons from pacific ocean governance. *Marine Policy*, 88, 333-341. <https://doi.org/10.1016/j.marpol.2017.03.002>
- Krailassuwan, S. (2019). History of Thai maritime trade. *Maritime Technology and Research*, 1(1), 9-14. <https://doi.org/10.33175/mtr.2019.147777>
- 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. <https://doi.org/10.1016/j.envint.2020.105528>
- Loonela, V., & Soumillion, S. (2020). *2020 Blue economy report: Blue sectors contribute to the recovery and pave way for EU Green Deal*. Press Release, European Commission.
- Novaglio, C., Bax, N., Boschetti, F., Emad, G. R., Frusher, S., Fullbrook, L., Hemer, M., Jennings, S., van Putten, I., Robinson, L. M., Spain, E., Vince, J., Voyer, M., Wood, G., & Fulton, E. A. (2021). Deep aspirations: Towards a sustainable offshore Blue economy. *Reviews in Fish Biology and Fisheries*. <https://doi.org/10.1007/s11160-020-09628-6>
- Okafor-Yarwood, I., Kadagi, N. I., Miranda, N. A. F., Uku, J., Elegbede, I. O., & Adewumi, I. J.

- (2020). The blue economy-cultural livelihood-ecosystem conservation triangle: The African experience. *Frontiers in Marine Science*, 7, 586. <https://doi.org/10.3389/fmars.2020.00586>
- Pauly, D. (2018). A vision for marine fisheries in a global blue economy. *Marine Policy*, 87, 371-374. <https://doi.org/10.1016/j.marpol.2017.11.010>
- Phelan, A., Ruhanen, L., & Mair, J. (2020). Ecosystem services approach for community-based ecotourism: towards an equitable and sustainable blue economy. *Journal of Sustainable Tourism*, 28(10), 1665-1685. <https://doi.org/10.1080/09669582.2020.1747475>
- Pinto, H., Cruz, A. R., & Combe, C. (2015). Cooperation and the emergence of maritime clusters in the Atlantic: Analysis and implications of innovation and human capital for blue growth. *Marine Policy*, 57, 167-177. <https://doi.org/10.1016/j.marpol.2015.03.029>
- Ragin, C. C. (2018). *What is Qualitative Comparative Analysis (QCA)?* Economic and Social Research Council's Research Methods Festival.
- Sampaolo, G., Lepore, D., & Spigarelli, F. (2021). Blue economy and the quadruple helix model: The case of Qingdao. *Environment, Development and Sustainability*, 23, 16803-16818. <https://doi.org/10.1007/s10668-021-01378-0>
- Sarker, S., Bhuyan, M. A. H., Rahman, M. M., Islam, M. A., Hossain, M. S., Basak, S. C., & Islam, M. M. (2018). From science to action: Exploring the potentials of Blue economy for enhancing economic sustainability in Bangladesh. *Ocean and Coastal Management*, 157, 180-192. <https://doi.org/10.1016/j.ocecoaman.2018.03.001>
- Satizábal, P., Dressler, W. H., Fabinyi, M., & Pido, M. D. (2020). Blue economy discourses and practices: Reconfiguring ocean spaces in the Philippines. *Maritime Studies*, 19(2), 207-221. <https://doi.org/10.1007/s40152-020-00168-0>
- Sharafuddin, M. A., & Madhavan, M. (2020a). Measurement model for assessing community based wellness tourism needs. *E-Review of Tourism Research*, 18(2), 311-336.
- Sharafuddin, M. A., & Madhavan, M. (2020b). Thematic evolution of blue tourism: A scientometric analysis and systematic review. *Global Business Review*. <https://doi.org/10.1177/0972150920966885>
- Silver, J. J., Gray, N. J., Campbell, L. M., Fairbanks, L. W., & Gruby, R. L. (2015a). Blue economy and competing discourses in international oceans governance. *Journal of Environment and Development*, 24(2), 135-160. <https://doi.org/10.1177/1070496515580797>
- Smith-Godfrey, S. (2016). Defining the blue economy. *Maritime Affairs*, 12(1), 58-64. <https://doi.org/10.1080/09733159.2016.1175131>
- Taylor, J. E. (2013). Knowing the black box: Methodological challenges in marine environmental history. *Environmental History*, 18(1), 60-75. <https://doi.org/10.1093/envhis/ems108>
- van Wyk, J. A. (2015). Defining the blue economy as a South African strategic priority: Toward a sustainable 10<sup>th</sup> province? *Journal of the Indian Ocean Region*, 11(2), 153-169. <https://doi.org/10.1080/19480881.2015.1066555>
- Wenhai, L., Cusack, C., Baker, M., Tao, W., Mingbao, C., Paige, K., Xiaofan, Z., Levin, L., Escobar, E., Amon, D., Yue, Y., Reitz, A., Neves, A. A. S., O'Rourke, E., Mannarini, G., Pearlman, J., Tinker, J., Horsburgh, K. J., Lehodey, P., Pouliquen, S., Dale, T., Peng, Z., & Yufeng, Y. (2019). Successful blue economy examples with an emphasis on international perspectives. *Frontiers in Marine Science*, 6, 261. <https://doi.org/10.3389/fmars.2019.00261>
- World Bank. (2017). *The potential of the blue economy: Increasing long-term benefits of the sustainable use of marine resources for small island developing states and coastal least developed countries*. World Bank, Washington DC.