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## Blue economy: Emerging global trends and India's multilateral cooperation

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### ABSTRACT

Blue economy, which promotes sustainable usages of ocean resources for economic growth and development, as well as preservation of the health of ocean ecosystem, has become a crucial element of the broader ecosystem of sustainable and inclusive development. The desire to sustainably harness the potential of ocean and marine resources has been amply visible at the national and global level. Technological innovations, investment and multilateral cooperation have further been facilitating progress in the sectors of blue economy. Placed in a central position in the Indian Ocean and with a vast exclusive economic zone (EEZ), India has substantial potential for tapping marine resources and blue economy could emerge as the paradigm of development in the future. New Delhi has taken many initiatives to promote blue economy activities and development of modern infrastructure for greater connectivity, international collaboration and trade facilitation. Further, it is seeking wider multilateral cooperation in areas of financing, technology transfer, capacity building and knowledge sharing. This paper underlines the importance of blue economy in a broader framework of sustainable development and analyses India's foreign policy orientation towards blue economy. Finally, it also discusses cooperation between India and European countries in the sectors of blue economy.

### KEYWORDS

Blue economy; sustainable development; SAGAR; IORA; European Union; multilateral cooperation

## Introduction

The blue economy has a huge potential for facilitating inclusive economic growth, creating employment opportunities for a spiralling population and achieving fundamental objectives of sustainable development. Oceans are characterised as primary protein providers in the global market, and also a significant ecosystem service provider; nevertheless, they are susceptible to the “tragedy of commons”.<sup>1</sup> Unsustainable practices harm not only the ecosystem but also undermine the prospects for achieving the objectives of sustainable development and livelihoods. However, a majority of deep marine resources still remain unexplored in different parts of the world. These untapped marine resources can

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be the recipe for future source of green economic growth. As a broader development strategy, the intrinsic principles and practices of blue economy have to be interlinked with concepts of sustainability, human well-being, social equity and principles of multilateralism for international cooperation. Although countries in the Indian Ocean Region (IOR) have civilisation linkages in the utilisation of marine resources, experts argue that the concept of a vibrant and dynamic blue economy is yet to evolve in India. Nevertheless, new policy orientation reflects that the country is keen to harness economic opportunities related to ocean and allied sectors and promote sustainable development.

With the vision of “SAGAR- *Security and Growth for All in the Region*”, blue economy has found a place in bilateral and multilateral cooperation with other countries. The Central Government and State Governments are providing financial incentives and loans to fishermen and entrepreneurs as well as building infrastructure for port development, port-led development and coastal community development. Considering India’s geo-strategic location in the Indian Ocean and current infrastructure and connectivity initiatives, New Delhi has been exploring various aspects of the blue economy.

This exploration has been made with a view to spurring a new momentum in economic growth and also shaping policies for inclusive sustainable development. Thus, the untapped marine resources of India can be the potential future natural capital utilised as ingredients for different industries and also have the capacity to generate livelihood opportunities for coastal communities without hampering the ocean ecosystem.

The European Union (EU) has already taken initiatives to tap the economic potential of marine resources for sustainable development and formulated a framework for its effective utilisation. The “Blue Growth” policies of sustainably managing marine resources are critical factors for EU 2020 action for sustainable and green growth in the region. European countries envisage that growth in multiple sectors of blue economy would create employment opportunities in the future.

The EU and India share a multifaceted partnership. Economic engagement is an important element in their partnership and their cooperation has been extended to political, security, innovation, science and technology realms. India and European countries are discussing stability, security, connectivity and sustainable management of marine resources in the framework of sustainable development. Further, in this broader notion of blue economy and India’s multilateral diplomacy, the paper analyses the prospects for blue economy in India. It assesses emerging trends in Indian foreign policy for extending cooperative relationship in the sectors of blue economy. Finally, it also discusses India’s cooperation with some European countries to boost the blue economy.

## **The blue economy: Definition, major components and potential**

Almost three-quarters of the planet is covered by the oceans, which plays a vital role in supporting life on Earth. The oceans are a source of food, energy and livelihoods for people and substantially contribute to maintaining the environment and biodiversity in the ecosystem. The appetite for marine resources by growing human population coupled with technological advancement induced by industrial revolution is putting pressure on marine ecosystem worldwide.<sup>2</sup>

Therefore, efforts towards sustainably managing global marine ecosystems and in improving the natural resilience of ocean ecosystem are important in order to build a

sustainable ocean economy.<sup>3</sup> Sustainable usage of marine resources and conservation of the oceans are the key objectives of the United Nation Sustainable Development Goal No 14. The world is looking towards natural capital of ocean for economic opportunities and creation of millions of green jobs and revival of economies in the post-recession period. The untapped potential of oceans offers future ingredients for achieving high green economic growth and generating new employment opportunities.

Gunter Pauli called for a solution-oriented approach to deal with challenges of sustainability, employment and overall development. He has argued that the focus should shift from identifying the problems to finding solutions. He envisaged a “zero emissions and zero waste” system and cycle.<sup>4</sup> Developing a policy narrative to put the common man at the centre of sustainable development, he notes that Green Economy is rich and elite oriented and requires high investment and big expenditure, but Blue Economy is more geared towards providing the basic needs of the common man.

He noted,

The first challenge is to respond to people’s needs. You respond to the basic needs with what people have. You’re not going to do that with produce from elsewhere. And your focus is not on being always cheaper - which never worked for the green economy - but on generating much more value.<sup>5</sup>

The traditional ocean economy got its new name as blue economy at Rio+ 20 summit in 2012 where the discussion was about green growth proponents.<sup>6</sup> Gunter Pauli in his book, *The Blue Economy 10 years – 100 innovations – 100 million jobs* talks about the utilisation of ocean resources. Silver et al. (2015)<sup>7</sup> identified four narratives about potential of blue economy from stakeholders who participated in Rio+20 summit as natural capital, good business model, integral part of small island nations and small-scale fisher community’s livelihood. Mostly the term “blue” was enmeshed with green economy as the new marine green economy,<sup>8</sup> and other synonymous terms were used by international organisations such as “Green Economy in a Blue World<sup>9</sup>”, “Blue Growth<sup>10</sup>” or “Green Growth in Fisheries and Aquaculture”.<sup>11</sup>

The concept was evolved with an agenda for sustainable management of marine resources. The term was accepted by almost all countries of the world and was seen as SDG 14, “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”. Apart from SDG, the concept was used synonymously as blue growth strategy by (EC 2014)<sup>12</sup>, blue growth programme by (FAO 2015)<sup>13</sup> and Blue Growth Portfolio by (World Bank; United Nations Department of Economic and Social Affairs 2017)<sup>14</sup> are other stake holders facilitating the blue growth strategy.

Broadly speaking, blue economy refers to a sustainable approach towards economic activities associated with coastal areas and oceans. It aims to promote economic development and generate livelihoods while maintaining environmental sustainability and stopping degradation of ocean resources. The definition of blue economy was given at Rio +20 where human well-being and social equity without harming the health of ocean ecosystem was discussed (Steffen 2012).<sup>15</sup>

Again, according to Goddard (2015),<sup>16</sup> the blue economy is a sustainable ocean economy where developmental marine activities have to keep a balance between capacity and resilience of health ocean systems. However, Smith-Godfrey (2016)<sup>17</sup> defined blue economy as quantitatively calculated terms where usage of blue resources have to be

standardised with obligation to societal development without hampering the health of ocean systems. From a practitioner's point of view, blue economy combines both, established conventional marine based industries like fishing, marine transport and tourism as well as latest and promising activities, such as aquaculture, seabed extractive activities, marine biotechnology, offshore renewable energy and bio-prospecting.<sup>18</sup>

Many of the ocean services such as carbon sequestration, coastal protection, waste disposal and the existence of biodiversity cannot be explained by contemporary market mechanisms.<sup>19</sup> Nevertheless, their utility cannot be undermined in addressing multiple socio-economic and environmental challenges. Thus, potential living and non-living blue resources around the world may become the catalyst for robust sustainable economic growth in the future.

The diversified blue economy consists of conventional marine industries like fisheries, tourism, and maritime transport but also wide array of "emerging industries" such as marine renewable energy, marine biotechnology and bio-prospecting, pharmaceuticals, deep sea mining and eco-tourism.<sup>20</sup> Table 1 summarises the type of activities in blue economy, ocean services, industries and drivers of growth. However, ecosystem services provided by blue resources are interlinked with living marine resources (traditional fisheries and aquaculture) and also non-living marine resources (sea bed mining, offshore oil and gas).

These activities that fall within the ambit of the ocean's call are commerce and trade activities, coastal zone management and monitoring the health parameters of blue resources. Ecosystem services such as carbon sequestration, coastal protection, and waste disposal for land-based industry and existence biodiversity conservation contribution may not be tangibly significant to the market economy; however, they are critical components of life supporting systems on Earth.

Conventional marine industries like fisheries, coastal tourism and marine transport have to be modernised with efficient green technology and investment. This green energy based technology has to be made in emerging industries like marine biotechnology, deep sea mining, coastal eco-tourism and marine renewables<sup>21</sup>

Further, doing business inside the ocean calls for coastal and marine zone management and monitoring the health parameters of blue resources. The monetary conversion of blue carbon resources is shown in Table 2. The rising exposure and risk of a burgeoning coastal population from sea level changes, storm surge, shoreline changes and climate change induced extreme events will drive the need for defensive coastal soft and hard structure development in the future.

In the name of "global land rush", multinational corporations, environmental non-governmental organisations and investors are trying to grab marine or blue resources.<sup>22</sup> There is a complaint from small scale marine industry that these big economic actors are not only controlling marine resources but also playing a role in determining the extent to which these marine resources will be used, managed and conserved.<sup>23</sup>

Blue economy has the potential to generate new employment opportunities and boost economic growth. According to a UNCSO report (UNCSO et al. 2016), *Ocean Economy 2030 Report*<sup>24</sup>, ocean resources would solve the global crisis of climate change, food security, energy, natural resources and also medicines. The report highlights that the contribution of global ocean economy is about US\$1.5 trillion (2.5% of Gross Value Added) at conservative estimate in 2010 and also providing about 31 million jobs.

**Table 1.** Components of blue economy.

Type of Activity	Blue Growth Services	Industries	Drivers of Growth of Blue Economy
Harvesting and trade of marine living resources	Sea Food	Fisheries Aquaculture	Food Security & Demand for Protein
	Marine biotechnology & bioprospecting	Pharmaceuticals & chemicals	R&D and usage for health care, cosmetic, enzyme, nutraceutical, and other industries
Extraction and use of marine non-living resources (non-renewable)	Extraction of Minerals	Seabed mining	Demand for minerals
	Extraction of energy sources	Oil and gas	Demand for (alternative) energy sources
	Freshwater Generation	Desalination	Demand for freshwater
Use of renewable non-exhaustible natural forces (wind, wave, and tidal energy)	Generation of (offshore) renewable Energy	Renewable	Demand for (alternative) energy sources
Commerce and trade in and around the oceans	Transport and trade	Shipping and shipbuilding Maritime transport Ports and related services	Growth in seaborne trade; transport demand; international regulations; maritime transport industries (shipbuilding, scrapping, registration, seafaring, port operations, etc.)
	Coastal Development	National planning ministries and departments, private sector	Coastal urbanisation, national regulations
	Tourism and Recreation	National tourism authorities, private sector, other relevant sectors	Global growth of tourism
Indirect contribution to economic activities and environments	Carbon Sequestration	Blue carbon	Climate mitigation
	Coastal Protection	Habitat protection, restoration	Resilient growth
	Waste Disposal for land-based industry	Assimilation of nutrients, solid waste	Wastewater Management
	Existence of Biodiversity	Protection of species, habitats	Conservation

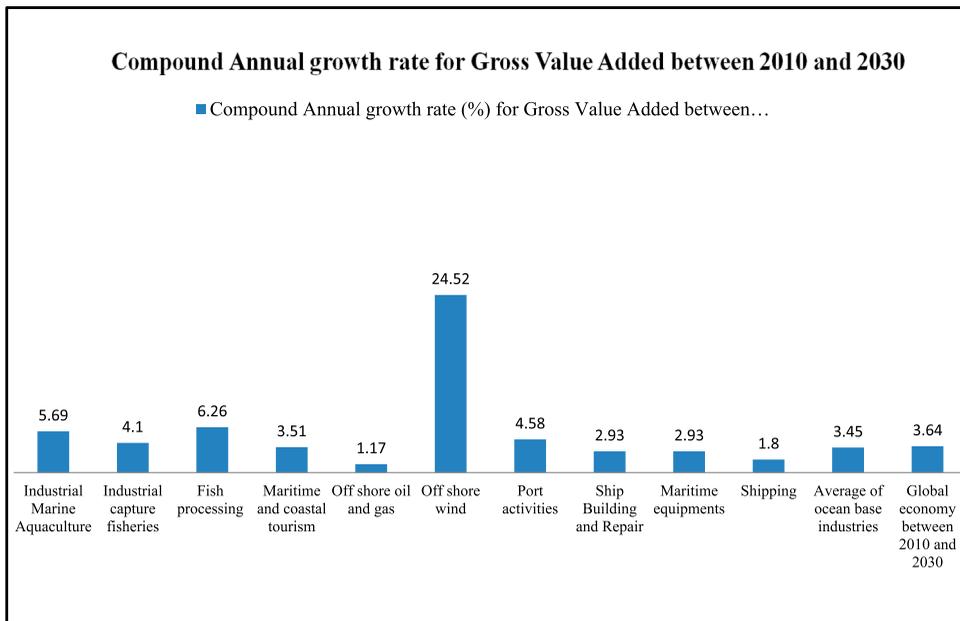
Source: World Bank and United Nations Department of Economic and Social Affairs. 2017. M. A. Atmanand et al., "Blue Economy of India and Technology Initiatives – I," *OCEANS – MTS/IEEE Kobe Techno-Oceans (OTO)*, 1–9. (2018), IEEE, <https://doi.org/10.1109/OCEANSKOBET.2018.8559252>. (accessed May 14, 2020).

**Table 2.** The monetisation of Coastal Blue Carbon stock around the world.

Ecosystem	Global Extent (Mha)	Current Conversion Rate (% yr <sup>-1</sup> )	Near Surface Susceptible Carbon (Mg CO <sub>2</sub> ha <sup>-1</sup> )	Carbon Emissions (Pg CO <sub>2</sub> yr <sup>-1</sup> )	Economic Cost (Billion US\$ yr <sup>-1</sup> )
Tidal Marsh	22–40	1.0–2.0	237–949	0.02–0.24	0.64–9.7
Mangroves	0.7–3.0	373–1492	0.09–0.45	3.6–18.5	
13.8–15.2					
Sea grass	17.7–60	0.4–2.6	131–522	0.05–0.33	1.9–13.7
Total	33.7–115.2			0.15–1.02 (0.45)	6.1–41.9

Source: Linwood Pendleton et al., "Estimating Global 'Blue Carbon' Emissions from Conversion and Degradation of Vegetated Coastal Ecosystems," *PLoS One* 7, no. 9 (2012).

About one-third of GVA (Gross Value Added) out of ocean based industries are contributed by offshore oil and gas industries. However, industrial capture fisheries and coastal tourism provides about one-third and one-quarter of total jobs, respectively.



**Figure 1.** Estimated Marine based Industry Growth (GVA) (2010–2030).

**Source:** OECD, *The Ocean Economy in 2030, 2016* (Paris: OECD Publishing). <https://doi.org/10.1787/9789264251724-en> (accessed May 14, 2020).

The majority of ocean based industries will outperform the global growth by 2030 in terms of value and employment creation as shown in Figure 1. It has also projected that the blue economy will almost double its contribution (US\$3 trillion) and will also create 40 million full-time employments under a business-as-usual scenario by 2030.

The strongest growth will be in offshore wind (24.52%), fish processing (6.26%), industrial marine aquaculture (5.69%), port activities (4.58%), industrial capture fisheries (4.1%) and maritime and coastal tourism (3.51%). These marine based industries – offshore wind (1257%), port activities (245%), fish processing (206%), industrial marine aquaculture (152%), and shipping (130%) – are potential sectors for creating jobs by 2030.

The blue resources have the potential to contribute in meeting sustainable development goals. The characteristics of sustainability of ocean ecosystems (blue resources) have potential linkages with economic, social and environmental criteria and dimension of earth systems. The objectives of SDG 14 are interlinked with other SDG goals including SDG 1- poverty, SDG 2- food security, SDG 3- health, SDG 8 - economic growth and employment, SDG 9- infrastructure, innovation and industrialisation, SDG 12 - sustainable consumption and production, SDG 13- climate change, SDG 15- terrestrial ecosystems and SDG 16-peaceful and inclusive societies. Therefore, a healthy blue ecosystem will be a win-win situation for socio-economic development in the future.

### Emerging regional and global trends

It is predicted that ocean based trade would quadruple by 2050<sup>25</sup>; two-thirds of food production will be farmed from the sea by 2030<sup>26</sup> and clean offshore wind energy would be

leading power generation technology in the coming days.<sup>27</sup> Estimated turnover of multiple sectors allied with the ocean economy ranges from US\$3 to 6 trillion annually, including fisheries and aquaculture contributing US\$100 billion every year and about 260 million jobs.<sup>28</sup> However, the turnover is considered to be much higher because some of the ecosystem services of the oceans are not quantifiable. Furthermore, the use of oceans for transportation, trade, etc. adds substantial economic value.

Various financial and technological innovations have evolved, which have the potential to boost blue growth. For example, the World Bank Group has announced the creation of “PROBLUE” under its blue economy programme. It is a new Multi-Donor Trust Fund which “supports the development of integrated, sustainable and healthy marine and coastal resources”.<sup>29</sup> It is part of the World Bank’s overall blue economy programme, and as of March 2020, it is worth around \$5.6 billion in active projects.<sup>30</sup>

Other donors are the European Commission, Sweden, Germany and Iceland. It is expected that the fund may attract more donations from other countries. With assistance from the World Bank, the Republic of Seychelles was the first country in the world to launch the first sovereign blue bond. The blue bond is considered a “pioneer financial instrument” for supporting sustainable projects for clean and green marine industries. It raised US\$ 15 million from the international market highlighting the financing opportunities for funding the sustainable use of blue resources in coastal countries.<sup>31</sup>

Blue economy has attracted the attention of IORA (Indian Ocean Rim region) member states. They are committed for establishing a “common vision that would make this sector a driver for balanced economic development in the Indian Ocean Rim region”.<sup>32</sup> Since the 14th IORA Ministerial Meeting in Perth, multiple capacity building programmes have been conducted in the sectors related to blue economy. The first IORA Ministerial Blue Economy conference was organised in 2015. The “Blue Economy Declaration” adopted at the conference seeks to utilise the oceans and maritime resources for spurring economic growth, creation of jobs and promoting innovation.

The Declaration maintains that utilisation of marine resources should be done sustainably in harmony with environmental protection. The Second Ministerial Blue Economy Conference was held on “Financing the Blue Economy” in 2017 in Jakarta, Indonesia. The need for investing more public and private financial resources was underlined in the deliberation. In order to mainstream the blue economy in the Action Plan, the IORA Action Plan 2017–2021 highlights the significance and need of blue economy in inclusive economic development, employment generation and education and management of marine resources.

The IORA has also established a Blue Economy Working Group (WGBE) (IORA 2019). Similarly, multilateral institutions such as Asia-Pacific Economic Cooperation (APEC), East Asia Summit (EAS), and South Asian Association for Regional Cooperation (SAARC) and Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) have also highlighted the potential and prospects of the Blue Economy.<sup>33</sup>

Blue economy is the fulcrum of socio-economic activities of small island countries, and plays a pivotal role in creating employment opportunities and substantially contributing to GDP. According to Smoor 2019, in countries like Palau and The Seychelles (small island nations), more than 50% of export earnings are contributed from marine based tourism and fishery industries contribute 10–50% of their GDP. There is a steady growth in economic activities related to coastal zones, seas and oceans in the EU.

The first annual report of EU on blue economy highlights a turnover of 566 billion Euros, creating value addition of 174 billion Euros and generating 3.5 million jobs. Spain generated one-fifth of total employment from sectors of blue economy. Italy, the UK and Greece were also successful in achieving growth and development in blue economy and allied sectors.<sup>34</sup>

Bangladesh also appears to be keen on harnessing the potential of Blue Economy. Dhaka proposed the “Bay of Bengal Partnership for Blue Economy” for an “inclusive and people centric”<sup>35</sup>, sustainable development of sea-based resources in 2014. Given that a large section of population is dependent on the sea for their livelihood and employment as well as engaged in fishing and commercial transportation, blue economy is significant for economic growth and development of the country.

Several measures, including setting up a research institute for the study of marine science, oceanography and training personnel to develop skills for the sustainable development of resources have been taken by the country. It also seeks to extend scientific collaboration with other countries for enriching their expertise in the areas of Blue Economy.<sup>36</sup> There are multiple areas such as seafood processing, marine biotechnology, exploration of oil, gas and other minerals, desalination and blue carbon which need to be further explored in the country.

These diversified trends show that blue economy has shown signs of growth in different parts of the world. National level strategy has been formulated in island nations. Many regional and global initiatives have also been taken in diversifying the economic growth strategy by taking an interest in marine resources. Countries are keen to promote socio-economic activities while maintaining and preserving the ocean health and coastal environment.

Although global financial support seems to be relatively lower compared to green activities, they have yielded positive results. Its importance lies in developing the financial support mechanism and resources. The remote islands in the South Pacific Ocean, which are mostly inhabited, are doing well on the ocean health index but countries like central Africa and Caribbean islands have degraded ocean systems. Thus, the need of the hour is to develop monitoring systems for tracking ocean health around the world before tapping the blue resources.

## **Blue economy in India**

India’s geography and natural habitat offer opportunities for developing a diversified blue economy in certain regions. Geographically, the country is surrounded by Bay of Bengal, Arabian Sea and Indian Ocean and has long diversified coastal areas. As part of socio-economic, cultural and local industries also with global interface, marine activities and coastal areas development are quite old practices in the country. In various phases and multiple forms, India has pursued a policy for sustainable development of coastal zones. Traditionally, local communities are involved in fisheries, tourism and other marine aquaculture activities in different parts of coastal areas.

In the contemporary discourse, the country is also taking initiatives for harnessing the potential of blue economy and helping coastal states promote emerging marine activities, which are considered an important recipe for growth of ocean economy. The SAGAR-MALA programme has identified 600 plus projects and investment of US\$ 120 billion

by 2020. An investment of US\$ 150 million per location under the programme is being proposed for development of Coastal Economic Zones.<sup>37</sup>

Prime Minister Modi said, “the Blue Economy must act as a catalyst in improving India’s progress.”<sup>38</sup> Apart from fisheries and coastal zone activities, India has also identified offshore renewable energy projects in coastal zones of Gujarat and Tamil Nadu<sup>39</sup>, though their impact is yet to be evaluated. Nevertheless, promoting new offshore renewable energy resources would be useful at the local level and would be a part of supporting SDG 2030.

Despite the huge potential, experts argue that India is unable to utilise its ocean resources due to a lack of technological advancements and trained human resources. Mainly the fisheries sector dominates the coastal and marine activities in the country. Several services and allied industries have not reached their full potential as yet. For example, Indian cruise tourism is yet to be fully explored. Goa and Kerala are popular tourist destinations due to the sea and backwaters; however, appropriate thrust for cruise tourism is still required. Sustainable infrastructure development is also needed to make the tourism industry robust.

It is estimated that the Asian cruise market has the potential to grow at 8% per annum, which may also have positive impact on the growth of the Indian cruise market. However, the growth would have been estimated before the outbreak of the Covid-19 pandemic. Consequently, it may open new investment and business opportunities and generate employment for Indian youth. It is also argued that marine resources would be exploited for renewable energy in the future. Their utilisation may require more skilled and trained human resources. Although a major segment of the Indian population is young, trained and skilled human resources in the field of environmental engineering and marine resource protection would be useful in shaping development.<sup>40</sup>

New debate over the blue economy has been developed and expert committees and groups have also been established on the blue economy; however, there is a challenge of building educational institutions in the country. Experts point out that there is need to develop a special and focused curriculum for the development of blue economy in the education system. Although institutions have been established for oceanic research and research has been conducted in various universities, when it comes to specific courses, experts report that no institute is teaching blue economy as a discipline in the country. They further note that marine economics as a stream does not have a strong theoretical foundation and sound technical know-how. The subject is primarily studied as a subsection of environment economics. Paucity of research and development budget and resources in this domain has restricted students from exploring the subject. Civil/ Mechanical/ Marine/ Naval Architecture students can be oriented towards ocean energy, which is one of the various pillars of blue economy.<sup>41</sup> Recently, the sector has attracted greater academic attention, which may lead to development of the discipline in the country.

Ocean generated blue resources have spatial distribution in almost all parts of the world but it is not playing a major role in poverty reduction and generation of livelihood programmes at the regional level. However, there is a lack of development of sustainable strategy in India for tapping blue resource based growth. There is a need to develop principles of sustainable blue economy and action has to be prioritised. Blue resources based industries have the potential to create millions of green jobs. The urge is to change the course in framing blue economy policies.

The first step is to frame maritime development policies aimed towards protecting and restoring the existing crucial blue resource base that directly provides food and livelihood to billions of people.<sup>42</sup> Restored fish stocks can provide sustainable green jobs to coastal communities in the world. Further, protected mangrove forests can be placed for not only global carbon sink but can obstruct coastal zones from storm surge, sea level rise and shoreline changes.

The other critical component of blue economy is to create new opportunities using new technology for sustainable economic activities around the world such as tapping renewable energy capacity (offshore wind farms; tidal and wave energy; and ocean thermal energy conversion) without disturbing the natural habitat of the region.<sup>43</sup> There are also opportunities to monetise the value of coastal blue carbon stock (mangrove, sea grass and salt marsh ecosystem) into global carbon finance markets. The other opportunities are sea bed mining, nutraceuticals, cosmetics, fisheries by product transformation, and the innovative marine molecules sector.<sup>44</sup> The need of the hour is to develop integrated coastal maritime policies with proactive economic incentives and legislative actions with investment flows from private and public organisations. Furthermore, ecosystem-based marine maritime spatial planning has to be effectively implemented to tap the benefit of blue economy in a sustainable manner.

The government of India has announced some infrastructure measures and development projects for coastal areas. Initiatives have been taken to upgrade infrastructure and construct new ports and basic infrastructure. The comprehensive SAGARMALA programme includes modernisation of port and new port development, port connectivity, port led industrialisation, coastal community development and coastal shipping and inland waterways development.<sup>45</sup>

Nevertheless, implementation and timely completion of infrastructure related projects is a challenge and reports suggest that the Sagarmala project has been implemented at a slow pace and only one-fifth of projects have been completed since 2015. Ports handle 90% of the country's export-import cargo by volume and 70% by value. Gujarat caters for 25–30% of the cargo traffic.<sup>46</sup>

The FICCI Task Force Report on Blue Economy also notes the “timely preparedness of the business community, whereas lack of readiness could entail heavy costs by way of losing business opportunities, dependence on others for strategic technologies, and new barriers to market access” would be crucial in harnessing the potential of blue economy in India.<sup>47</sup>

## **India, blue economy and multilateral cooperation**

Economic priorities have figured high on the foreign policy agenda of India. Emphasising democracy, demography and demand, it is argued that these factors would make the country an attractive destination for foreign investment<sup>48</sup> as well as “driving India's ties with countries around the world.”<sup>49</sup> Prime Minister Modi said, “The four factors that make India reliable for investors and makes India unique are democracy, demography, demand and decisiveness”.<sup>50</sup> A new urge for establishing inclusive and sustainable approaches towards development has been emphasised.

In the broader context of multilateral cooperation for promoting economic growth and development, New Delhi has recognised the potential of various sectors of blue economy

and it has emerged as one of the main areas of cooperation. Addressing the Sustainable Blue Economy Conference in Nairobi, 2018, Shri Nitin Gadkari, Union Minister for Shipping, Road Transport & Highways, said, “Blue Economy [is] a critical aspect of India’s economic development agenda.”<sup>51</sup> He talked about India’s Sagarmala Programme and how it can “revolutionise maritime logistics and port-led developments” in the country.

Peace, stability and security are important factors for enhancing commerce and trade as well as maintaining freedom of navigation, and over-flight and other internationally lawful uses of the airspace. As argued, “protection and preservation of marine resources, sustainable and responsible fishery framework is very important to build a regional consensus on maritime security and cooperation.”<sup>52</sup> In his keynote address at the Shangri La Dialogue, Prime Minister Narendra Modi said, “the Indian Ocean has shaped much of India’s history. It now holds the key to our future”. He also noted, “In the Indian Ocean region, our relationships are becoming stronger. We are also helping build economic capabilities and improve maritime security for our friends and partners.”<sup>53</sup>

India supports the freedom of navigation, and calls for multilateral cooperation in the areas of technology transfer; capacity building or sharing of assets is required for realising the potential of blue growth and development. Financing of initiatives for promoting blue economy is critical. India seeks a more cooperative and integrated future for the region through overall development of blue economy, promoting increased cooperation in trade, tourism and investment, infrastructure development, marine science and technology, sustainable fisheries and protection of marine environment.<sup>54</sup>

India has been extending cooperation bilaterally and also participating in initiatives taken at multilateral forums across South Asia, Africa, Pacific Island Developing and Europe. Minister of State, Muraleedharan noted, “Blue Economy is one of the most important areas of cooperation where countries of South Asia, Pacific Island Developing and the West, have developed national strategies and maritime agendas to develop Blue Economy.”<sup>55</sup>

## **India-Europe cooperation in the sectors of blue economy**

India and European countries are expanding cooperation in the sectors of Blue economy. Norway and India signed a MoU on Ocean Dialogue and the establishment of the Joint Task Force on “Blue Economy”. The Norwegian Prime Minister noted, “Prime Minister Modi has presented a vision of sustainability and growth for all people in the region.” One of the goals of my government’s ocean strategy is to promote sustainable value creation and employment in the ocean-based industries.<sup>56</sup>

As a part of the joint initiatives between India and Norway, several projects on combating marine litter are already being implemented. India and Norway signed a Letter of Intent for developing a new framework for collaboration on Integrated Ocean Management and Research.<sup>57</sup> Cooperation in the area of blue economy has also been mentioned in the India-EU Joint Statement during 14th India-EU Summit. It states that India and EU “attached importance to the security, stability, connectivity and sustainable development of Oceans and Seas in the context of developing the ‘blue economy’.”<sup>58</sup> Ambassador Rajiv Bhatia, Chair of FICCI Task Force on the Blue Economy, argued for “tangible international cooperation” for “securing meaningful progress” in promoting of Blue economy, and also noted that EU’s achievements in the field of blue economy should be emulated by newer countries.<sup>59</sup>

German Chancellor Angela Merkel visited India in November 2019. New Delhi and Berlin signed the Memorandum of Understanding for Cooperation in Inland, Coastal and Maritime Technology.<sup>60</sup> Germany is also one of the countries in promoting blue growth in the EU. Therefore, there is potential for India-Germany cooperation in marine resources and technology. Blue economy also offers avenues for cooperation between India and France. Emmanuel Lenain France's Ambassador to India, stated,

it appears that our national security depends not only on traditional security policies but also on our ability to foster multilateralism as well as the blue economy and environmental protection. These convictions will continue to guide France's policy in the Indo-Pacific, in close coordination with India.<sup>61</sup>

The French Development Agency (AFD) signed a MoU with the Indian Ocean Rim Association for "Strengthening the Capacities of IORA in Promoting the Blue Economy and Fisheries Management" in March 2020.<sup>62</sup>

## The way forward

Blue economy has the potential to facilitate green economic growth, generate new employment opportunities and contribute to broader conceptual framework of sustainable development agenda. It remains a policy challenge for maintaining an effective balance between environmental sustainability and economic growth.

Various sectors of blue economy can open new avenues for employment opportunities, local sustainable development as well as regional and global cooperation. The importance of blue economy lies in preserving the ecosystem of the oceans while providing new resources and employment opportunities.

It also talks about the preserving, sustaining and improving bio-diverse ocean resources for the future. More eco-friendly activities in the oceans would be important in sustaining their health. Initiatives have been taken to harness opportunities offered by blue economy in the different parts of the world, which have both local and global dimensions.

Benefits of blue economy are also widely recognised in India; however, some of its sectors still remain unexplored and underdeveloped. Now policy orientation seems to be shifting and several new measures have been taken to tap the potential of blue economy. India has been building infrastructure and providing incentives. New Delhi has also been expanding cooperation and developing partnerships in various sectors of blue economy with different countries. IORA remains its main focus for New Delhi's cooperation and initiatives taken by the Modi government might give new impetus to the development of blue economy. Blue economy may help to spur new growth momentum and employment generation.

India and the EU share a wide-ranging partnership, and cooperation in blue economy between India and European countries has also been explored. India and the EU have been keen to expand their partnership in areas of sustainable development. Policy synergies have been developed at the government level. Development agencies and business are also active in harnessing opportunities in promoting sustainable development of the maritime domain. Thus, it urges the need of blue growth strategy by identifying blue resources, contemporary marine governance, and sustainably managing ocean spaces. It has the potential to further open avenues for enhancing their cooperation.

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