

BLUE ECONOMY

The Next Sunrise Sector

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INTRODUCTION

Blue economy, considered as the next sunrise sector, is very slowly and steadily percolating from the margins to the mainstream. Blue economy or Ocean economy can be defined as sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health. Through the sustainable use of oceans, this rising sector has great potential for boosting economic growth by providing opportunities for income generation and jobs. All water bodies are necessary for human existence and are also critical to global and national development, food security and the fight against hunger and poverty. However, overfishing, pollution and unsustainable coastal activities are contributing to irreversible damage to habitats, biodiversity and ecological functions. Adding fuel to the fire, climate change and ocean acidification are compounding huge impacts further aggravating the situation.

Blue economy can be considered as a new model of business which has the potential to shift society from scarcity to abundance with what locally is available by tackling issues that are causing environmental and related problems in new and innovative ways.

SUSTAINABLE DEVELOPMENT GOAL 14: LIFE BELOW WATER

The UN explains: “ Our oceans — their temperature, circulation, chemistry, and ecosystems — play a fundamental role in making Earth habitable.

Our rainwater, drinking water, weather, climate, coastlines, much of our food, and even the oxygen in the air we breathe, are all ultimately provided and regulated by the sea. Throughout history, oceans and seas have been vital conduits for trade and transportation. Careful management of this essential global resource is a key feature of a sustainable future.”

As per the UNDP figures, the ocean covers three-quarters of the Earth’s surface and represents 99% of the living space by volume. Around 40% of the ocean is suffering from pollution, depleted fisheries, loss of coastal habitats and other human interventions. More than 3 billion people depend on marine and coastal biodiversity for their livelihoods. The market value of marine and coastal resources and industries is estimated at US\$ 3 Trillion per year, about 5 percent of the Global GDP. Therefore, the targeting SDG 14 commits countries to unite over the conservation and protection of our oceans, seas and marine resources for sustainable development. Moreover, this SDG focuses on sub-themes like prevention of marine pollution of all kinds, sustainable management and protection of marine and coastal ecosystems, minimization of ocean acidification, ending illegal, unreported and unregulated fishing practices and increasing the scientific knowledge and developing the technical capacity of marine resource management.

As per the recent SDG Report 2020, countries have made good progress in curtailing the illegal, unreported and unregulated fishing practices but still concerted global action is required to combat such practices worldwide. Small scale fishers are the ones who contribute to the ocean economy, still, they are the marginalized ones. The global pandemic has affected their source of livelihood as the global demand got disrupted and with less transportation and no access to a potential market, they suffered a huge loss on their parts. This has made supporting small-scale producers a paramount necessity in the world as they are the sole producers of sustainable food systems.

The establishment of Sustainable Development Goal (SDG) 14 is a highly valuable step forward, prompting much-needed discussion of the future of the ocean, and signalling its importance to our world. They also suggest, apart from general problems in the contemporary ocean, a concern for the socio-economic dimensions of ocean governance with an explicit focus upon the distinctive positions of the least developed countries and small island states.

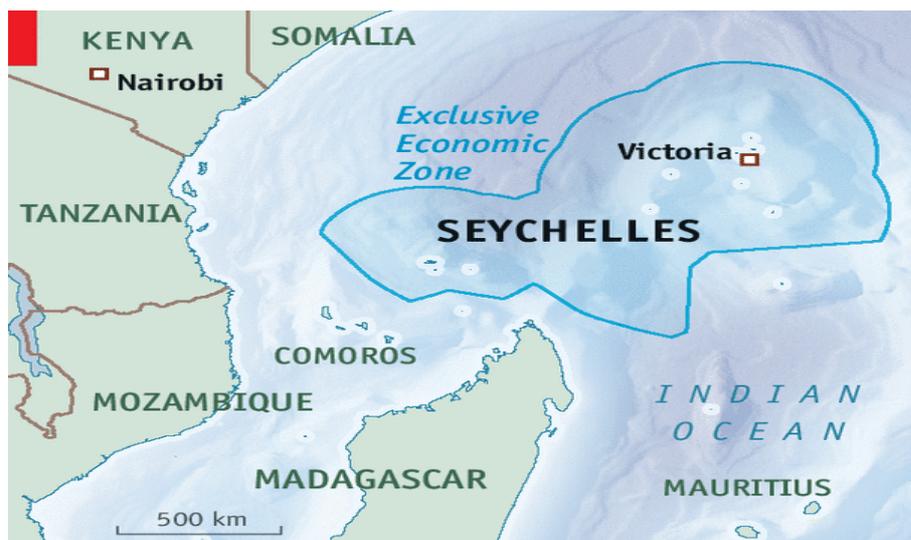
SUCCESSFUL STORIES OF BLUE ECONOMY

1. SEYCHELLES

Seychelles is an archipelagic island country in the Indian Ocean at the eastern edge of the Somali which consists of 115 islands. Around 99.96 per cent of the territory of Seychelles is ocean-based, with a land area of only about 454 km² and is relevant for the sustainable blue economy. It has one of the smallest GDPs in the world where the source of livelihoods is mainly dependent on marine resources and fishing revenue.

In 2008 Seychelles defaulted on payments for its \$406m (£311.6m) national debt and had to be bailed out by the International Monetary Fund. At the same time, pollution, climate change and overexploitation of marine resources led to the destruction of the coastal ecosystem which comprised more than two-thirds of the local economy leading to disturbed coastal erosion and flooding.

Thereafter, in order to boost its blue economy, Seychelles signed a unique deal in 2015: almost \$22m (£16.8m) of its national debt was written off, in exchange for the country doing more to protect its oceans. The “debt for nature” swap involved the US conservation group The Nature Conservancy (TNC) buying the debt, in exchange for a promise to create 13 new marine protected areas (MPAs). It enabled them to protect the ecological assets of the nation as well as promote businesses based on ocean resources to flourish. Seychelles became the first nation to participate in an ocean-based debt for nature swap.



Source: The Economist

This creates a sustainable source of funding to support Seychelles in the creation and management of 400,000 square kilometres of new marine protected areas. Half of the new protected areas have a high level of biodiversity protection, marine and coastal life are rare, endangered or breeding and spawning takes place. No economic activity is allowed in these areas, which are designated as national parks. The other half includes habitats and species that have some tolerance for human interventions. A few activities are allowed in those areas with new regulations overfishing, tourism and other commercial activity. Protected areas generated more revenue than the costs and sustainable marine conservation is very crucial for a small island nation like Seychelles which is dependent on the environment.

In the five years since, this nation has progressed from protecting 0.04% to 30% of its national waters, covering 410,000 square kilometres (158,000 square miles) of the ocean – an area larger than Germany. Fishing, oil exploration and other marine development has been banned or severely restricted in the MPAs. Anyone who carries out illegal activities in these areas faces a hefty fine, or, in some cases, imprisonment. Seychelles had foreshadowed the commitment to protect 30% of their EEZ, with half in no-take zones, during Rio+20 based on a successful debt swap agreement.

2. GAMBIA

Founded in 2007, TRY Oyster Women's Association works to tackle the joint challenges of unemployment in the region and coastal degradation through the empowerment of marginalized communities of Gambian society. Established at a time when the Gambian government was formalizing its commitment to best practices for sustainable management and the conservation of biodiversity. TRY Oyster Women's Association is a collective of around 500 female oyster harvesters from across 15 villages in the Greater Banjul Area. They work in cooperatives where they are trained and educated about how to balance sustainable

harvesting along with management of delicate mangrove ecosystems. Moreover, the cooperatives have set higher standards of working and sanitary conditions along with assistance in processing, packaging and marketing of oysters.

The traditional harvesting methods used by the community was unsustainable in nature. Oysters were collected from the root of the mangroves using tools like machetes. This method exposed harvesters to a high degree of risk as they lacked appropriate gloves and footwear to protect them from injuries. The harvesters also lacked adequate storage and sanitation facilities due to which they ended up selling the oysters below potential market value. Even the mangrove ecosystems are under persistent threat of overexploitation due to population growth, coastal degradation, pollution, waste accumulation and unsustainable extraction methods by the harvesters.

The Cooperatives have been mobilized to reforest local mangroves and understand the benefits of environmentally responsible resource management. The association also operates a microfinance project that provides local women with access to basic credit and savings services, financial advice and business training.



Source: Newsaf.cgtn

The most significant achievements of TRY are the empowerment of women collecting oysters who are no longer working in those worsening economic, social and environmental conditions. Rather they are organised into groups with shared vision and goals in solidarity as legally organised decision-makers. They are participating in the decision process of how their natural resources should be utilised sustainably in their communities and at the national front.

Some examples of specific outcomes of TRY's work include:

- Value chain improvements resulted in the more than doubling of the price/kg for oysters due to the larger size and improved hygiene, handling and marketing of the product
- 377 women benefited from financial literacy training and loans ranging from approximately USD 30 – USD 180 each
- More than 148 TRY Association and community members planted 33.5 hectares of mangroves that are thriving two years later.
- 15 daughters of TRY members graduated from TRY's two-year life skills and alternative livelihoods skills training programme.

What Contributed to the Success of TRY?

There are many enabling key factors that contributed to the successful management of TRY.

Consulting the primary stakeholders starting with women harvesters at all the levels was the most important element. Responding to their common needs and gaining their trust so that they can accept the trade-offs needed for sustainable resource management. One can also witness the Inter-Ministerial collaboration between the Gambian Ministry of Fisheries, the Department of Parks and Wildlife Management, the National Environment Agency and the Department of Forestry and technical and financial support from the USAID/BaNafaa Project and from other donors for shorter-term projects, including UNDP, GEF, Action Aid, the British Council and the Government of The Gambia.

Earlier the oyster and cockle fisheries industry in The Gambia was not included in the Department of Fisheries strategies or management plans due to the low economic returns and limited government resources. The oyster harvesting communities were vulnerable. Through rights-based co-management, TRY and its members are now sustainably managing the country's shellfish resources and associated ecosystems at very little cost to the government, while also improving their own livelihoods.

3. MADAGASCAR

In Madagascar, the transition towards the Blue Economy is being built on the sustainable management of small-scale fisheries developed by the local fishing communities. Seafood exporters, government and marine conservation NGOs have worked with these fishers over the last decade to establish locally managed marine areas as the building blocks of this management process.

Octopus fishing is a crucial part of the economy in southwest Madagascar and The Vezo fishers of southwest Madagascar are among the poorest coastal people in the world. Their livelihoods along with the middlemen and other downstream actors in the chain, depend on the sustainability of this industry. Cope Frito is the principal buyer and exporter of octopus in the region.

As a first step, they closed a part of their octopus fishing grounds to all fishing and witnessed dramatic increase in the catches after opening. This was practiced by other people in the community too and till date fishers have carried out more than 250 temporary closures along the 400 km of coastline. These short-term closures have resulted in improved catches and greater income.



Source: *Geographic.org*

With the help of conservation NGOs, they established community-led Marine Protected Areas (MPAs) or Locally-Managed Marine Areas (LMMAs): areas of sea and coastal habitats under formal community management. The network of LMMAs now includes about 85 fishing villages along the southwest Madagascar coast, involving 60,000 people. Government policy has also facilitated this local management. Fishing communities used local traditional laws: Dina - to govern the temporary closures, and subsequently the LMMAs, at a local level. The Dina were drawn up through a process of consensus, beginning at the level of individual villages, then groupings of neighbouring villages, and finally by all of the villages within the respective LMMA. These laws are legalised in formal courts and so gain the backing of the

national judiciary. Through community-managed MPAs, fishers have formal rights to manage their fisheries now which will play a critical role in further building safeguarding their fishing rights in the future.

This whole community managed system in Madagascar has proved that fishers, marine conservers and seafood companies can work together in successful management of marine biodiversity. Community managed MPAs or LMMAs are the framework for the through which this management gets recognised.

4. **MEDITERRANEAN**

In the Mediterranean region, International Institutions such as UN Environment and its Mediterranean Action Plan (UNEP/MAP), the Union for the Mediterranean (UfM) and the European Union (EU) are working to coordinate their strategies for a Sustainable Blue Economy, in line with the Mid-term strategy of the General Fisheries Commission for the Mediterranean (GFCM), the EU’s Blue Growth long term strategy and the Mediterranean Strategy for Sustainable Development 2016-25 (MSSD) which was adopted by all the Contracting Parties of the Barcelona Convention (BC).

The Barcelona Convention (for the Protection of Marine Environment and the Coastal Region of the Mediterranean) is a regional sea programme adopted in 1995 that now entails 22 Contracting Parties. Its main purpose is to “protect the Mediterranean marine and coastal environment while boosting regional and national plans to achieve sustainable development.



Source: Maribe.eu

The Mediterranean Strategy for Sustainable Development 2016-25 provides a strategic policy framework to adapt the 2030 Sustainable Development Agenda to the regional, subregional, and national levels, securing a sustainable future for the Mediterranean region consistent with the SDG. It addresses key areas of the marine and coastal environments impacted by human activity, using an ecosystem-based approach and planning tools such as Integrated Coastal Zone Management (ICZM). The MSSD is closely linked with the “the Sustainable Consumption and Production Action Plan for the Mediterranean” (SCP Action Plan). Which

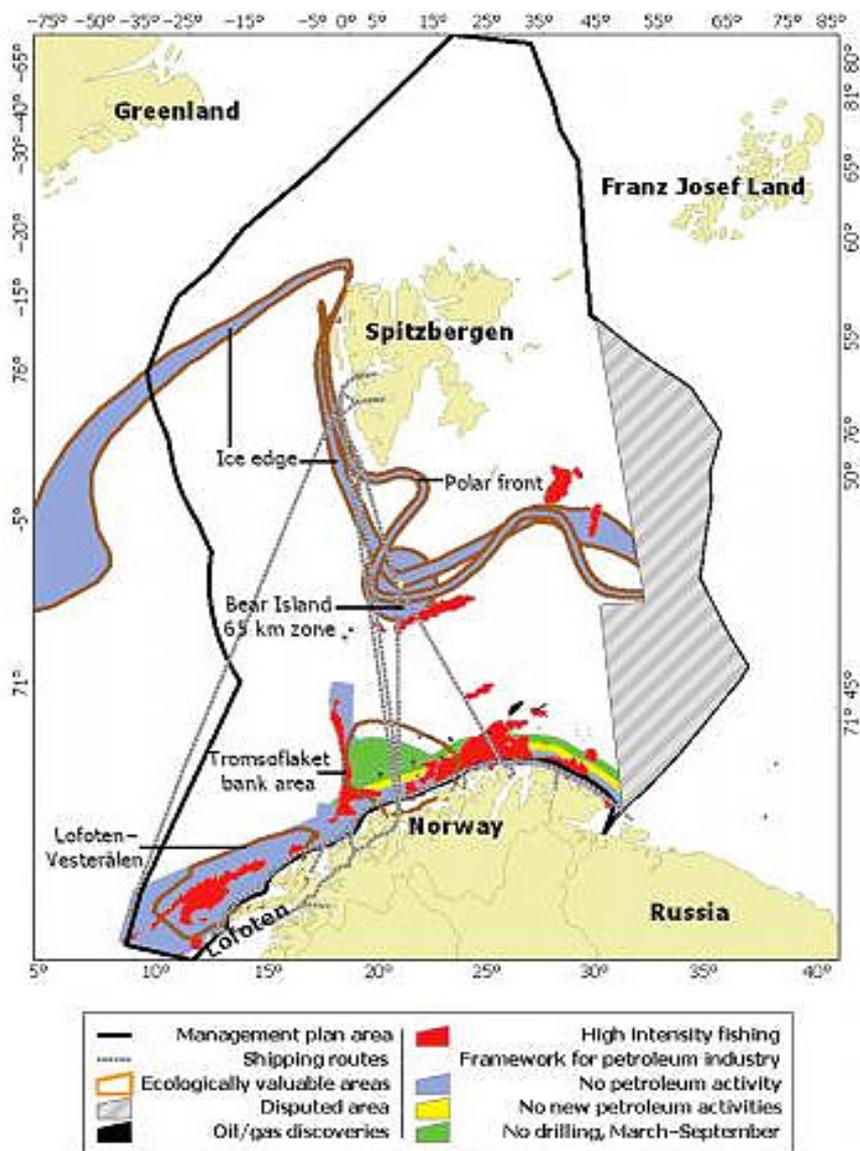
focuses on four economic sectors: food and agriculture, goods manufacturing, tourism, and housing and construction.

To manage the development in the Fisheries sector, the GFCM provides a regional platform where the issues related to small scale fishing can be addressed by the primary stakeholders.

Since 2005, many actions have been developed through the several programmes for regional cooperation to raise awareness about SCP and to provide capacity building and technical assistance to the countries of the region.

5. NORWAY

Norway, a global leader in ocean governance and management, is one of the successful countries in implementation of the blue economy. In 2002, the Norwegian government adopted the Johannesburg Declaration which called for an ‘Ecosystem Approach’ to the management of all marine ecosystems by 2010. The Barents Sea Plan was formulated by an inter-ministerial group in 2002 with its adoption in 2006 and its first revision in 2011. The Lofoten–Barents Sea area was the first of three regional marine spatial plans; the others cover the Norwegian Sea and the North Sea. Through strategic implementation of the plan, Norway is highly successful in economizing its seas. The plan for the Barents Sea-Lofoten area was updated in 2011 and 2015; while the plan for the Norwegian Sea was adopted in 2009; and the plan for the Norwegian part of the North Sea and Skagerrak was adopted in 2013. Complete revisions are envisaged for 2020, 2025 and 2030 for the Barents Sea, the Norwegian Sea and the North Sea/Skagerrak, respectively. The sea areas surrounding Svalbard, including Bjørnøya, have been identified and described as particularly valuable and vulnerable areas in the Barents Sea–Lofoten management plan.



Source: msp.ioc-unesco.org

According to the plan, revision of each management plan will be carried out about every 15 years. This year, 2020, the Norway government will publish a white paper presenting an overall revision of the management plan for the entire Barents Sea-Lofoten area. As part of the scientific basis for the revision, the definition used as a basis for determining the delimitation of the marginal ice zone will be reviewed.

Apart from successful implementation of the sea plans, the country's government also initiated seabed and seabird mapping monitoring programmes namely, the MAREANO and SEAPOP, which collects extensive bathymetric, geological, chemical and biological data for use in management planning. These programmes were initiated as the government felt the need to fill the gaps of knowledge uncertainties and to systematise and improve awareness

about the Barents Sea. Overall, Norway has ambitious goals for maintaining a more or less undisturbed environment in Svalbard.

WHAT'S IN IT FOR INDIA?

The Indian Ocean is projected to become a dominant global geopolitical and economic force in the near future. The region's contribution to the global GDP has significantly improved over the last century; from an average six to seven percent in 1980 to 10 percent (USD 78 trillion) in 2014. The Water surrounding India is governed by the fisheries sector and dominated by local fishermen involved in basic activities to earn a living. Ocean resources are still untapped, sea cruise tourism is not yet fully realized, underdevelopment of marine biotechnology, off-shore deep-sea mining and commercialization of marine renewable energy. Another immediate problem is, no institute in the country offers a blue economy as a discipline. The Blue Economy has a huge potential to generate income, employment, exports deals etc. But the benefits cannot flow automatically. Conscious efforts have to be made in terms of planning, investment, and sectoral allocation of factor endowments to ensure natural growth of the Blue Economy. Indian Ocean Rim Association (IORA) is an inter-governmental organisation aimed at strengthening regional cooperation and sustainable development within the Indian Ocean region through its 22 Member States and 10 Dialogue Partners. In order to prioritize areas for different sectors of Blue Economy, they must be identified and must be infused with dynamism in selected sectors, based on the potential and feasibility of Blue Economy in India.

One of the initial projects released by the government is the Sagarmala Programme in March 2015. Prime Minister Narendra Modi announced a new doctrine named 'SAGAR' (Security and Growth for All in the Region) during his visit to Mauritius, in March 2015. The plan is to emphasize new investments in the areas of port development and infrastructure, accord priority to capacity building and training, deploy modern and sophisticated fishing vessels, and focus on value addition in fisheries, aquaculture and cold chain development.



Source: *semantic scholar.org*

Another Policy which was released in 2017, is The National Policy on Marine Fisheries, aimed at preserving marine life and ocean health in India's EEZ, through sustainable harvest, is based on seven pillars, in sequence; sustainable development, socio-economic upliftment of fishers, the principle of subsidiarity, partnership, inter-generational equity, gender justice and precautionary approach. While the gist of the policy's vision is to maintain a healthy fisheries sector, which would cater to the needs of the present and future generations, its mission is to ensure the sustainability of the resources where the policy framework is in sync with the national, social and economic goals, livelihood sustainability and socio-economic upliftment of the fishing community.

Some of the International offshore majors showing interest in collaborating/joint development with India:

- SMD, UK - for subsea mining machines and underwater equipment.
- Technip, France, with an Indian subsidiary - developing the deep-sea mining system.
- GSR, Belgium - They have an area allocated in the Clarion Clipperton Zone, Pacific Ocean.
- Keppel Corporation, Singapore – interest in collaboration on mining machine development and Environmental Impact Assessment. The corporation has high expertise in building and maintaining offshore platforms and oil and gas drilling rigs. Ocean Mineral Singapore (OMS), is a subsidiary of Keppel Corporation.
- IHC Merwede, Netherlands - for developing mining machines, building a mining platforms and the complete system.
- SeaTech Solutions International (S) Pte Ltd, Singapore - associate in upgrading and equipping the mining platform/ship.
- India-Norway Task Force on Blue Economy for Sustainable Development. The two countries also commenced a new collaboration on Integrated Ocean Management & Research.

ANALYSIS

The Blue Economy includes the Circular Economy but goes beyond it. Both are about radical resource productivity, zero waste and Sustainability. Blue Economy is more comprehensive because it shifts from core business/core competence that force companies to emphasize on one industry by considering local economic development as a priority, ensuring increase in local purchasing power ultimately enabling additional money circulation regionally. This allows growth without inflation and increases local production of goods and services. Education is critical in adopting and nurturing the Blue Economy, increasing its awareness, potential and skills. Industry and education sectors should come close to each other in evolving business models, adopting system thinking, re-designing their products and processes and exploring reuse, remanufacturing and recycling by resorting to the sustainability principles. It is also important to note that “Inclusiveness”, “Diversity”, and “Sustainability” are interconnected; and the adherence to the principles of sustainability in the context of

complex issues of diversity, social justice and inclusion needs to be fully addressed by the Blue Economy. It has been recognized globally that sustainability in the implementation of the Blue Economy is the only way to ensure an equitable and inclusive society in the future.

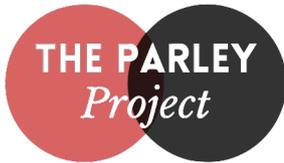
CONCLUSION

The oceans, seas, rivers and lakes comprise global or national commons and, therefore, it will need rules and regulations, international agreements and financing principles that cannot be borrowed and adopted from those of the “business as usual” model. A sustained and coordinated effort is needed from all states, including all international organisations and others related with important ocean jurisdictions, to re-examine and evolve their rules and performance in the context of this Sustainable Blue Economy's new objective of achieving SDG14. The global economy is forecast to grow from the current estimates of about \$93 trillion to about \$173 trillion by 2031. This expansion will need resources including investments for capacity expansion, adaptations of existing operations, new sectors, technology development and induction, and new management tools. The success of our generation in combining growth with sustainability would depend on our preparedness for addressing inadequacies of policy, regulation, technology, finance and management tools. The Blue Economy is seeking precisely this paradigm shift.

REFERENCES

1. What is blue economy? (2007) Retrieved from <https://www.worldbank.org/en/news/infographic/2017/06/06/blue-economy>
2. Cecilie von Quillfeldt and Terje Thorsnes. (2015) Blue Economy: Sharing success stories to inspire change. Retrieved from https://wedocs.unep.org/bitstream/handle/20.500.11822/9844/Blue_economy_sharing_success_stories_to_inspire_change-2015blue_economy_sharing_success_stories.pdf.pdf?sequence=3&isAllowed=y
3. SDG 14: Life Below Water. Retrieved from <https://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-14-life-below-water.html>
4. FCCI and KAS (2019). Comprehensive Study on Blue Economy dealing on exploitation and preservation of the marine environment. Retrieved from <https://www.kas.de/en/web/indien/laenderberichte/detail/-/content/blue-economy-global-best-practices-takeaways-for-india-and-partner-nations-3>
5. Kristian Petrick, Jérémie Fosse, Heloïse Lammens, Fabio Fiorucci (2017). Blue economy in the Mediterranean. Retrieved from https://ufmsecretariat.org/wp-content/uploads/2017/12/UfMS_Blue-Economy_Report.pdf
6. Blue economy, Knowledge Centre, Seychelles. Retrieved from <http://blueeconomyseychelles.org/>

7. Ifesinachi Okafor (2020) The Blue Economy–Cultural Livelihood–Ecosystem Conservation Triangle: The African Experience. Retrieved from <https://www.frontiersin.org/articles/10.3389/fmars.2020.00586/full>
8. Meld. St. 20 (2014–2015) Report. Update of the integrated management plan for the Barents Sea – Lofoten area including an update of the delimitation of the marginal ice zone. Retrieved from <https://www.regjeringen.no/contentassets/d6743df219c74ea198e50d9778720e5a/en-gb/pdfs/stm201420150020000engpdfs.pdf>
9. FCCI Task Force (2017). Blue Economy vision 2025. Harnessing business potential for India Inc and International Partners. Retrieved from <http://ficci.in/spdocument/20896/Blue-Economy-Vision-2025.pdf>
10. Aparna Roy. (2019) Blue economy in the Indian ocean: Governance perspective for sustainable development in the region. Retrieved from https://www.orfonline.org/research/blue-economy-in-the-indian-ocean-governance-perspectives-for-sustainable-development-in-the-region-47449/#_edn10
11. Indian Ocean Rim Association (IORA). Retrieved from <https://www.iora.int/en>
12. News Intervention Bureau. (2020) India and Norway strengthen partnership on blue economy. Retrieved from <https://www.newsintervention.com/india-and-norway-strengthen-partnership-on-blue-economy/>



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We aim to connect students to professionals for mutually insightful discussions and conversations about various pressing agendas. Through various youth conferences and carefully curated agenda-specific events we wish to bring together inquisitive minds to research and provide new insights to contemporary issues and come up with solutions for the same.



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