Quadrilateral Virtual Series on Blue Economy-India's Pathway to a Sustainable, Secure and Resilient Economy

Blue Economy for Prosperity in Post Pandemic World:
Opportunities in Traditional Sectors and New Avenues for Financing

November 10, 2020; 1100- 1600 hrs on Virtual Platform

Concept Note

Background

Blue Economy has become the buzzword in the present times, vis-à-vis the growing concern over sustainably harnessing the ocean and water body resources. While global ocean economy generates about $1.5 trillion per annum and about 350 million jobs globally, around one billion people depend on oceans for their food. The oceans (Blue Economy) offer a definitive scope for additional resources by way of food, energy, transport, recreation and a decentralised source of economic activity and employment creation. An effective harnessing of Blue Economy by mankind presets a condition to care for ecological balance, ocean health and regeneration of these precious resources.

Rising sea levels could submerge valuable land, extreme weather and rising temperature could disrupt water cycle and hurt agriculture, fisheries, rich marine biodiversity and further to aggravate tropical diseases. This could cause unimaginable suffering and economic loss. The good news, though, is that the world community has realised this impending danger and has been working hard to find mitigating solutions.

A fast-growing public opinion is clearly demanding the future economic growth and development to be more sustainable. Caring for the oceans' health would always be central to any meaningful solutions. Some estimates suggest that in many sectors, the ocean-based productivity will exceed the corresponding land-based production both in value and employment generation by 2030. However, these benefits would accrue only if the oceans remain healthy. This realisation over time has culminated in the emergence of a whole new paradigm called the "Blue Economy".

The transitioning of the ocean harnessing to more sustainable methods or the Blue Economy would need additional resources by way of finance, skills, technology, new materials and management tools for adaptations not only for the expansion but also for maintaining the current levels of economic activity in a sustainable manner. The concept of Blue Economy seeks to promote economic growth by mapping the potential of water- based resources and ensuring

environmental sustainability of the oceans and coastal areas. Coastal states are exploring new opportunities for economic growth in their marine waters.

Blue Economy advocacy provides ample opportunities for public-private partnerships and can be instrumental in facilitating stakeholder-Government interactions. The scope therefore, includes activities that explore and develop ocean resources; use ocean and coastal space; protect the ocean environment; use ocean products as a main input; provide goods and services to support ocean activities; and develop mechanisms to ensure the equitable sharing of national wealth derived from the Blue Economy.

The extent of India's maritime space is immense: 7,516.5 km of coastline, 2.37 million sq km of exclusive economic zone and 530,000 sq km of continental shelf. India as a growing economy is aware of the criticality of resource endowment and the need for inclusive sustainable development. It is poised to emerge as a major maritime and naval power and has placed Blue Economy high on its agenda for economic growth.

India, apart from possessing vast land territory, has additional significant area of maritime under its jurisdiction. India was recognised as pioneer investor in ocean mining. It has an opportunity to enhance its economic growth by developing Blue Economy. Besides generating revenue, different sectors of Blue Economy can play a significant role in addressing social conflicts/tensions, which are predominant in local areas of coasts by providing employment opportunities. The essential objective is to develop Blue Economy through a robust regulatory framework which contributes to sustainable use of existing natural resources.

Session 1: Leveraging the potential of Traditional Sectors

The key traditional sectors of Blue Economy are fisheries, ports and shipping, marine tourism, offshore oil and gas, marine biotechnology, deep-sea mining, renewable energy and transport and logistics. The role of Blue Economy, which aims at optimum and sustainable use of oceanic resources for growth and development, is critical for the coastal states with the potential to develop strong hinterland linkages and value chains.

Traditional ocean industries such as fisheries, tourism, and maritime transport in India present huge scope for development. Industry and service sector development associated with emerging sectors like offshore renewable energy, aquaculture, seabed extractive activities, and marine biotechnology and bioprospecting while having immense potential, have been rather slow in development.

The **shipping, ports, marine logistics** and allied sectors form the backbone of Blue Economy, with 80% of global trade by volume and 70% by value are carried by sea and handled by ports. Global seaborne trade is projected to triple by 2030, offering immense growth and employment

opportunities. The Govt of India has a visionary integrated programme for development of this critical value chain through 'Sagarmala' which is central to the Govt's maritime vision. Port modernisation, port connectivity enhancement, port linked industrialisation and development of coastal economic zones and coastal community development are integral elements of this strategy. The private sector is envisaged to play a major role in fulfilling this vision.

Coastal Shipping has recently become an important means of moving goods across the country. Catching fish and farming of fish (aquaculture) has become not only a source of food but also a source of income. Further, offshore gas and oil and mining are a very important element of national income and wealth. Coastal tourism contributes to income and provides employment in coastal areas. Sustainable marine energy can play a vital role in economic development and also in mitigating ill effects of climate change. With advancement of new technology, deep-sea mining, huge potential for exploration of hydrocarbons, petroleum, natural gas, rare earth metals, demand for ports and shipping services would contribute to India's economic growth in the future.

Fisheries has always been an essential tool in the global efforts for ensuring food security. Global per capita fish consumption went up from meagre 9 kgs in 1961 to over 20 kgs in 2015, accounting for about 17% of animal protein consumed by the world population. With the first sale value of over $360 billion, excluding substantial collateral activities relating to fisheries services, the sector provides livelihood to close to 300 million people. According to the Food and Agriculture Organisation (FAO), the global fisheries production, both captured and aquaculture, has grown from less than 20 million tons in 1950 to over 171 million metric tons (MMT) in 2016. With the marine catch in the slow growth lane since the mid-eighties, the growth has been largely contributed by aquaculture reaching an overall production share of 47% (80 MMT) and the balance 53% (91 MMT) coming from the capture stock. Inland capture contributed nearly 13% (11.6 MMT) to the gross production. Aquaculture also produces around 30 MMT aquatic plants.

Fisheries sector is a major industry in India, especially in its coastal states, employing over 14 million people. Furthermore, India's fresh-water resources consist of 195,210 kms (121,300 mi) of rivers and canals, 2.9 million hectares of minor and major reservoirs, 2.4 million hectares of ponds and lakes, and about 0.8 million hectares of flood plain wetlands and water bodies. India is forecast to register a cumulative growth in fisheries of 24.6 % over 2016-2030 period, which is quite favourable compared to other major producers like China (18%), Indonesia (32%), Vietnam (26%) and Chile (45%). India's aquaculture is expected to grow at a phenomenal 44%.

The Government of India has focused on 'Blue Revolution' (Neeli Kranti) by sustainable utilization of fisheries and protection of livelihoods of fishers, which will encompass the 'Blue Growth Initiative', to address the issues such as competing demands for ocean space, the need for Marine

Spatial Planning (MSP), demand for mineral and oil exploration/extraction from the seas, the increasing volumes of maritime commercial traffic and reservation of spaces for strategic defence purposes. The government, as per this policy, will engage in international as well as regional cooperation to showcase India's capability in managing its marine resources.

Initiatives by multilateral agencies such as the International Coral Reef Initiative, PROFISH and PROBLUE by World Bank (The key themes of the PROBLUE programme are: i) management of fisheries and aquaculture, ii) marine pollution, including plastic, iii) sustainable development of coastal tourism and iv) other sectors namely maritime transport, offshore renewable energy, and governance issues) make a major contribution to awareness and helping fund the public goods aspect of Blue Economy development.

Marine Tourism is amongst the fastest growing sectors of global economy with multiple upstream and downstream benefits by way of infrastructure, transport, furniture & furnishing, food, capacity building and a host of other services. Tourism also generates a large number of quality jobs and promotes local development and growth opportunities. India, with its rich history, culture, ecological diversity, long coastline, numerous islands and nearly all climatic zones, has seen significant sectoral growth and has immense scope to emerge as a global leader, subject to the nation's ability to develop efficient, clean, safe and competitive facilities with quality skills and sustainability.

The United Nations World Tourism Organization (UNWTO) has estimated the contribution of travel, tourism and related sectors to global GDP at over 11%, amounting to over $8 trillion. The sector also supports over 313 million jobs, almost 10% of total global jobs. The number of global tourists has risen from a meagre 25 million in 1950 to a staggering 1.2 billion in 2016. This is expected to swell to 1.8 billion by 2030.

The sector is expected to continue robust growth in the coming decade and its total contribution to GDP is likely to reach 11.7% with an estimated value of $12.5 trillion by 2028. In the same period, the jobs supported by the sector would also grow to over 413 million, with a share of 11.6% of the global job market. UNWTO (2018) estimates the value of travel, tourism and related up and down stream sectors in India at $236 billion (9.4% of GDP). This share is expected to expand to $463 billion (9.9% of GDP) by 2028.

As regards employment, travel, tourism and related sectors supported over 26 million jobs (5.1%), and this number is expected to grow to over 33 million. International tourist arrivals are forecast to grow from 18.6 million (2017) to over 30 million by 2028. The sector also attracted estimated capital investment of around $39 billion in 2018, which is expected to grow to $80 billion in 2028. Tourism spending is led by domestic tourists at 87% of the total. Similarly, majority spending on travel is driven by leisure (94.6%).

According to an OECD report, marine and coastal tourism will become the largest component of the overall ocean economy by 2030, exceeding the offshore oil and gas sector. The contribution of marine and coastal tourism in the overall Blue Economy will be 26%, followed by oil and gas sector (21%), ports (15%), marine equipment (10%) and other segments.

Session 2: Financing Blue Economy

Economic growth is an essential imperative for human development and better living standards. However, growth without care for the environment has been causing serious problems by way of pollution, soil degradation, deforestation and loss of biodiversity. Given that slowing the economic growth is neither desirable nor possible, the society would be forced to urgently consider two broad mitigating options and these are: a) reduce the resource intensity of growth by applying the well-tested principles of Reduce-Reuse-Recycle (also called as circular economy), and b) find new resources by expanding sustainable harnessing of the oceans and other water bodies, popularly called as Blue Economy.

The World Bank Group, supported by other multilateral/regional development banks, has a treaty-based partnership with the United Nations for supporting the global developmental agenda and has embedded its development finance in three basic goals of green, clean, and resilient world.

In addition to the traditional sources of finance, an important source of finance for sustainable development would come from the fast- growing market of green, blue and climate bonds, started by the World Bank group in 2007. By 2019, the World Bank had issued green bonds exceeding a total of over USD 13 billion in over 150 issuances in about 20 currencies. As of end 2018, they had over 90 eligible projects with a total commitment of over USD 15 billion. International Financial Corporation of the World Group also entered the green bond market in 2010 to raise funding for clean energy projects and till mid-2020, issued over 170 sets of green bonds worth USD 10.4 billion in some 20 currencies. Following the World Bank group initiative, the green bond market has expanded exponentially with a wide range of public and private entities entering this growing space. A Bloomberg NEF report of 5 October. 2020 measures the cumulative green bond issuance to have already crossed USD 1 trillion mark.

Significant finances are also flowing into sustainable development through national budgets, loans, equity, bilateral, regional and multilateral financing for development. For India, the most attractive Blue Economy segments for investments would include ports, shipping, inland river transport, coastal/cruise/eco-tourism, energy, fisheries and marine biotechnology/pharmaceutical. Considering the performance so far, financing, per se, would not be a limiting factor for developing sustainable blue initiatives.

There is little doubt about the long- term profitability of the sustainable practices, however, the businesses would surely seek greater clarity on the availability of affordable financing. Having committed to the Sustainable Development Goals under the Agenda 2030 and the Paris Accord for addressing the risks of climate change, the world community has been working for adapting the global financial ecosystem for encouraging greater investments into the sustainable development. It is important to explore the investment opportunities present in the sectors of Blue Economy but it is equally important to pursue 'sustainable investment'.

In 2017, a partnership between the European Commission, WWF, the Prince of Wales's International Sustainability Unit supported by the European Investment Bank (EIB) led to the creation of the **Sustainable Blue Economy Finance Principles**, a 14-point principle to ensure compliance with SDG 14 (Life Below Water) and to ensure that ocean-related investment delivers long-term value without having a negative impact on marine ecosystems, on efforts to reduce carbon emissions, or on ocean-based businesses of all sizes and the livelihoods of people who depend on them. The Principles are also intended to support the development of financial instruments and development models that prove most effective in the context of ocean investment, notably in emerging fields where the stakes are even higher.[1]

Since 2010, ADB has $2.2 billion of Green Bonds and expects to create blue investments to support Blue Economy. At the 52nd Annual Meeting of the ADB's Board of Governors in Fiji in May 2019, the Asian Development Bank (ADB) launched an 'Action Plan for Healthy Oceans and Sustainable Blue Economies' for Asia and the Pacific along with the ADB Oceans Financing Initiative. The initiative which aligns with ADB's Strategy 2030 Operational Priorities, underlines the agenda of ensuring sustainable and inclusive development and protection of marine ecosystems, in compliance with SDG 14 (life below water). The Oceans Financing Initiative includes enhancing private sector investment in blue economy and related area. Through this Initiative, ADB will be expanding investments and providing technical assistance of USD 5 billion between 2019-2024. The plan which supports the tenets of Blue Economy along with creating livelihood and business opportunities, targets four areas- sustainable fisheries and tourism; ecosystem management; marine pollution; and coastal and port infrastructure development.[2]

The global compliance with the SDG and Paris Accord commitments would need USD 5-7 trillion annually. India, on its part, would need an estimated USD 2.65 trillion by 2030. Even though these figures appear astronomical, given the size of the world economy and that of the financial market, this target seems fairly achievable. The size of the global green bond issuance in 2019 reached USD 255 billion and estimates for 2020 are expected to log over USD 350 billion. The

[1] https://www.wwf.org.uk/updates/sustainable-blue-economy-finance-principles
[2] https://blogs.adb.org/blog/deep-clean-how-blue-finance-can-save-our-oceans

Climate Bond Initiative is working to raise a whopping USD 100 trillion through bonds for environmental solutions. With USD 10.3 billion worth of transactions in the first half of 2019, India has also emerged as a major green bond market.

Objective

The proposed webinar would focus on the drivers/stimulators to develop Blue Economy for India: growth in trade, transport demand, coastal urbanization, growth of tourism, demand for food, nutrition, usage for health care, requirement for minerals and energy resources, competition, demand for mitigation of GHGs and environmental sustainability. It would give an insight into the traditional sectors of Blue Economy, accentuating the scope of Blue Economy in India along with providing an evidence-based assessment of the emerging global and domestic trends for financing sustainable development, including the potential challenges and possible solutions.

- **Key Objective:** Blue Economy can spark a new wave of development – a Blue Revolution. There is a need to encourage proactive, inclusive and non-intrusive governance which supports Blue Economy sectors, within the framework of the nation's pursuit of Sustainable Development Goals (SDGs). How can private sector engage with counterparts in government, policy circles and academia to lead this new phase of growth while adhering to the principles of environmental sustainability and social inclusion to meet the objective of economic viability and long-term profitability. How to ensure that this growth does not spawn negative spin-offs unlike the undesirable effects of the Industrial Revolution on environment and society while going beyond the basics of protecting the environment and ecological balance to actually ensuring that this growth makes a positive impact on human well-being?

The sessions would discuss the following aspects:

Session 1

- What role will the private sector from the key established Blue Economy sectors such as shipping play to develop an inclusive and sustainable development of Blue Economy in India either through private domestic and international partnerships or the PPP mode: what are the challenges and opportunities and possible recommendations.
- In the livelihood and food security sector of **fisheries and aquaculture**, sustainable growth would call for a calibrated strategy for developing fisheries and planning for market expansion (by 2030, the demand-supply gap is expected to be about 30 MMT and a large part of this would be met through enhanced aquaculture production), promotion of high-value species in aquaculture, sustainable aquaculture practices, addressing the high rejection rate, adoption of new technologies, Big data applications and blockchains. What

are the challenges and opportunities for developing the sector with the right mix of international partnerships and leveraging local expertise?

- The Blue Economy includes **Circular Economy** and goes beyond it. Which sectors of Blue Economy currently leverage the fundamental concept of Circular Economy for optimal resource productivity, zero wastage and quality? How can the principles of Circular economy be applied to Blue Economy development?
- What models and value chains can be created within Blue Economy sectors connecting to external sectors through **international partnerships** to leveraging technology and innovation for vertical and horizontal integration while applying the core principles of self-reliance and localization – with the best of global technology and skills to make this development self-sustaining, resource efficient and **'Glocal'**?
- The sectors of Blue Economy are intertwined with several other sectors and thus have the potential to have a multiplier effect greater than the mere sectoral impact. There is a need for industry clusters to support knowledge sharing, promote access to capital and build foundation for partnerships between government agencies, research institutions, and private sectors and entrepreneurs. Are **marine clusters** effective and what preconditions are required for their success?
- At **the policy level**, how can synergy be created among multitudinous agencies and ministries to incentivise and propel Blue growth in a sustainable manner? As the Blue Economy benefits would be largely realised through the PPP mode, is enough being done by Government and industry to develop partnerships in Blue Economy?
- Blue Economy has a potential to create additional employment opportunities, encourage innovation, and provide opportunities for knowledge-based activities in key maritime sectors. How can industry problem statements be connected to research by academic institutions ? What incentives promote **industry-academia partnership** to commercialise innovative for cost- effective technology for Blue Economy?
- Blue Economy requires a specific set of skills that are attuned to the requirement of sensitively and sustainably harnessing Blue resources. Instances such as the EU initiative of The **Blue careers** projects work programme aim to establish platforms for cooperation between business and education to raise the attractiveness of "blue careers". What are the best practices and issues to be kept in mind while designing such a skilling ecosystem and policy framework?
- What measures can be taken to harness inland water and other resources sustainably especially in **landlocked countries to promote Blue Economy**?

Session 2

- Sustainable financial markets and systems are evolving in sync with the global and domestic regulatory and advocacy trends. The resulting policy and regulatory framework would progressively make it more difficult and expensive to raise finances for unsustainable business activities. This applies to all economic activities including Blue Economy sectors: There will be a **shift from business as usual to sustainable business**. Private sector must adapt proactively to this changing framework to ensure the smooth flow of future financing along the sustainability routes- be it investments, aid, equity or bonds. What are the challenges in the Blue Economy sectors to this adaptation and how can they be addressed? What positive case studies may be highlighted?
- Industry has a moral obligation to adhere to principles of sustainability and contribute to the regeneration of oceans and maintaining ecological balance to ensure long term profitability of business ventures in Blue Economy. The perception of sustainability being expensive is balanced by the consideration of positive externalities. Unsustainable practices also cause direct losses on account of health care, soil degradation, loss of biodiversity, loss of quality ecosystem services, including habitat, tourism and recreation, disasters and finally climate change – costs that impact the private sector eventually. Is there a growing realisation within the private sector and a willingness to take on the challenge proactively ?
- As per the UNSG's Roadmap for Financing the 2030 Agenda, the SDGs could open USD 12 trillion of additional market opportunities and create 380 million new jobs. Action on climate change would also result in a saving of about USD 26 trillion by 2030. How can there be greater engagement by industry in this opportunity? The key challenge to implementing these far-reaching solutions is the issue of mobilising finance from the private sector since these activities are largely perceived as global public goods. How can large-scale investments be attracted to support these projects while meeting the private sector criteria of generating a return on investment.
- Marine conservation and responsible finance will support Blue Economy development in future. Currently there are wide funding gaps globally in this area. Collaborative and consortium funding and management models exist in PPP mode integrating government, for-profit and non-profit enterprises, NGOs, and community groups. What are the opportunities and challenges for private sector to engage more for the development of **Blue Finance** systems.
- What role can **"Blue funds"** arranged by governments or development finance institutions, providing credit enhancement to projects in the form of 'blue credits' play in this endeavour[3]?

[3] https://blogs.adb.org/blog/deep-clean-how-blue-finance-can-save-our-oceans
This note contains sections of FICCI - KAS Report on Blue Economy: Global Best Practices, Takeaways for India and Partner Nations, December 2019