

Proposal to Build online Training Modules to Support the Blue Economy Policy and the New Opportunities Advance Level Programs

The Government of India has shown significant strategic intent to ensure our presence in the global power play. The ***Security And Growth for All in the Region (SAGAR)*** vision by the Honourable Prime Minister is a significant declaration at the apex level to revive our position as a maritime power in the region. It also recognizes the security concerns and the blue economic opportunities that exist. The SAGAR vision, no doubt is a maritime construct and attempts to position India, in a leadership role in the entire region. The sustainable blue economy possibilities and also the opportunities in the freshwater systems deserve far more attention to ensure growth and prosperity across the board. The coastal and riverine communities can thrive with better management of the ecosystem and effective governance mechanisms.

The Government of India has been following up with the SAGAR vision declaration and announced multiple mega projects like the Sagarmala, Bharatmala, Inland Water Transport, Gati Shakti and many more. The ***Blue Economy Policy*** has been under consideration for over two years and multiple ministries and other entities have forwarded their comments to strengthen the draft document. The Government of India is going to announce the Nation's Blue Economy Policy by Sep 2023. The policy is a critical announcement, given the large coastline we have and even the Exclusive Economic Zone (EEZ) has got a recent boost with the increase from 200 nm to 350 nm from the international body. The present contribution of the blue economy to the GDP is only 4% and there is significant potential to enhance it to at least five times.

The Underwater Domain Awareness (UDA) Framework being progressed by the Maritime Research Centre (MRC), Pune is well placed to manage the challenges & opportunities, arising out of such massive strategic push by the Government of India. It can also potentially bring the nations within the region together and keep the extra-regional powers at bay. India can potentially ensure its leadership role by presenting itself as a capacity & capability building partner for the nations in the region. The digital oceans through implementation of effective UDA framework will bring, far more transparency and ensure enhanced governance. Within the nation itself, the decision makers and the stakeholders need to be sensitized about the challenges and opportunities.

An initiative led by the Director general Shipping (DG Shipping), to realize effective potential of the blue economy for the tropical waters of the Indian Ocean Region (IOR) and beyond can significantly ensure true implementation of the SAGAR vision. The UDA framework comprising of policy & technology intervention along with acoustic capacity & capability building will be the key to this initiative. The earlier ten modules dealt with appreciating the broad UDA framework and the core areas of applications. This series of twelve advance modules will address the specific Blue Economy requirement and the policy being announced.

Proposal

The sensitization of the stakeholders and policy makers on the relevance and nuances of the Blue Economy is a critical first step. A series of E-learning modules (three hours each) has been planned to provide a convenient and effective knowledge enhancement for the policy makers and stakeholders. The modules will address the various aspects of the capacity & capability building for growth in the sustainable blue economy and freshwater management in the country. The beneficiaries will include policy makers at the central, state and the local levels, the community representatives, support groups, foundations working on the ground, regulators, enforcement agencies and more. The advance modules will be for the specific blue economy sectors and sustainable development objectives.

The list of the twelve modules is provided below:

Modules

(a) Basics of the Blue Economy and its Origin.

Given that the earth is 75% water and the potential of living and non-living resources is unimaginable. Even the possibility of energy transition and transportation is infinite. The blue economy as a concept has massive sustainability advantage over the green and other competing opportunities. The module will present the broad challenges and opportunities for the blue economy.

(b) Global Status and the Indian Context.

Originating from the book by Gunter Pauli, the global community has taken up the Blue Economic opportunities in a structured manner. The United Nations, the European Union, the Global Powers like the West Block and more have well defined Blue Economic Policies. India is not far behind and the Government has announced multiple mega projects and initiatives to harness the blue economic possibilities. The upcoming policy announcement will bring far more synergy and structure to the efforts.

(c) Blue Economic Policy.

The draft Blue Economy Policy has been in circulation for the last two years to get inputs from the multiple ministries and other bodies. The FICCI has also constituted a Blue Economy Task Force to make sure that the Corporate India is ready for this major policy announcement. Sensitizing the entire government machinery and the associated entities on the salient aspects of the policy will be an important task.

(d) Deep Sea Mining.

The Deep-Sea Mining is a critical component of the Blue Economy. The global community invested significantly in the last few decades to explore the possible undersea resources across the deep oceans. The rare earth metals and minerals are

abundantly available in the oceans and can potentially change the course of our economic growth. India has been a pioneer investor for the exploration exercise since 1987. The International Seabed Authority (ISA), is the global UN body that is responsible to manage the entire Deep Sea Mining effort. The global policy is likely to be announced for exploitation, that can be a game changer.

(e) Living Resources.

The living resources available underwater has huge potential to mitigate the human food security requirement and also feed to cattle and fertilizer in agriculture. The nutritional value in seafood is extremely high so the potential to harvest them for sustainable means is huge. Fisheries, aquaculture, seaweeds and more, need far more attention to harness their full potential. The tropical waters are known for their rich biodiversity and thus their potential for food security is massive. Export potential of seafood is huge and balancing the sustainability aspects should be a priority.

(f) Shipping, Coastal Transportation and Inland Waterways.

India with its over 7,500 km coastline and good network of rivers across the heartland has massive potential to develop its transportation network across the water bodies. The water transport is known for its sustainable means and also cost effectiveness. India has a significant potential to develop the water transport network and build massive multi-modal connectivity to reduce the logistics cost across sectors. The carbon footprint of the water transport system is known to be the least. The present estimate of logistics cost in India is 17%, which can be easily reduced to single digits. Such a move will bring down the cost of goods and services to a level that will have cascading impact across sectors.

(g) Energy Transition and the Blue Oceans.

The Oceans have massive potential for renewable energy and also alternate sources to the fossil fuels. The Electric Vehicle (EV) growth requires rare earth metals like manganese, nickel, copper, cobalt, etc., that are abundantly available undersea as polymetallic nodules. Wind, wave, tide and more are sustainable sources of renewable energy and can be harnessed to meet the energy demand for accelerated economic growth.

(h) Sustainable Blue Economy.

The significant shift towards the oceans and the water bodies for resources, connectivity, energy transition, climate change monitoring, early warning for disaster management and more, can be a major cause of concern. Sustainable Development is critical and we need to be aware of the impact on the ecosystem before we allow mass plundering. Blue economy has massive potential, however we have to be mindful of the sustainability concerns. Regulatory protections need to be put in place before we open up the new frontiers for human exploration and exploitation.

(i) Livelihood for Coastal/Riverine Communities.

The corporates entering into the blue economy is unavoidable, however the marginalization of the coastal and riverine communities is going to be a major crisis. The traditional livelihood practices have been extremely sustainable, however they fail in scaling up as per the requirements of the modern times. We need to encourage innovation to bridge this gap of scaling up of the traditional practices and ensuring sustainable blue economy. The digital transformation will allow policy & technology interventions to bridge this governance gap.

(j) Tourism and Safe Diving in our water bodies.

Tourism is a major component of the blue economy, however the pressures of urbanization and industrialization has ensured massive scale pollution and public health & safety concerns. Focused approach will allow opening up of innovative options in coastal and riverine tourism. Formalizing the tourism sector with modern digital tools will bring far better safety standards and public confidence.

(k) Capacity & Capability Building in the Tropical Waters

The tropical waters of the Indian Ocean Region (IOR) and beyond present unique challenges and opportunities. The west has been pushing their technology and knowhow, knowing fully well that it does not work in these waters. India has a great opportunity to present itself as a leader in the region by offering capacity & capability building support to our developing neighbours. The demographic bulge in the entire region can be a major security concern, if not channelized into meaningful engagement.

(l) Ocean Governance through Digital Transformation – Marine Spatial Planning(MSP).

The true realization of the SAGAR vision of the Honourable Prime Minister will be the effective ocean governance mechanism. Digital transformation is an accepted governance mechanism. The Marine Spatial Planning (MSP) is the digital transformation across sectors and dimensions to govern the underwater space. MSP in the underwater domain, particularly in the tropical waters needs specific understanding of the site-specific local condition. The west has been pushing their technology and knowhow with limited or no success. We as a nation have no option but to get involved and build indigenous means. The same, can then be shared with our neighbours in the entire Indo-Pacific region.

The Potential Participants

The potential participants for the E-learning modules will include:

- (a) The Fisheries Department.

- (b) The Water Resource Departments.
- (c) The Public Sector Undertakings (PSUs).
- (d) The Administrative Training Institutes under the Government of India.
- (e) Maritime Boards in all the nine Coastal States.
- (f) Environmental Regulators and Disaster Management Authorities.
- (g) Energy Regulators
- (h) Surface Transport Departments & Regulators
- (i) Auditors and Science & Technology Departments

The participants will be provided with significant amount of reading material, along with the presentation in the form of a video. The MRC runs a digital platform, named the UDA Digest and has two forms of contents. A series of short articles (1500 words), presenting the easy read content for quick appreciation of the UDA framework and its varied aspects. The second is the short reports, comprising of serious research outputs from in-house research fellows and senior domain experts. The short reports are 10,000 words, serious piece of research output with references and detailed scientific and analytic effort. These are all peer reviewed by the specific subject matter expert and the in-house research team.

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