LIFE BELOW WATER: PERSPECTIVE SUSTAINABLE DEVELOPMENT GOALS 14

Abstract

In 2012, the United Nations called for a collective voice to acknowledge and find a solution to issues related to environment, economy and politics facing humanity. The conference led to a consensus on 17 Sustainable Development Goals (SDGs) to sustain the delicate ecological balance of our globe. These objectives have been set for the period of 2015 – 2030. Towards this end, the NDA Government of India has established a policy think-tank called NITI Aayog, which produced a blueprint for economic development and a cooperative federation using a bottom-up approach.

The SDG14 – Life below Water – addresses the various resources pertaining to marine life that require responsible handling. The Government of India has defined the challenges that threaten to sustain the oceans and launched a number of all-encompassing schemes and projects to address these issues. The Government has laid emphasis on the protection of shared marine spaces using Blue Economy as an effective tool for its implementation. This will provide India an opportunity to be the beacon of hope for the whole world.

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I. INTRODUCTION

In 2012, the United Nations called for a collective voice at the conference on Sustainable Development in Rio de Janeiro to address the environmental, political, and economic challenges facing humanity. They addressed issues that are imperative to sustaining the delicate ecological balance of our globe, its natural resources, education and employment, health and peace, poverty, and more. The consensus reached at the conference set in motion the seventeen Sustainable Development Goals. These objectives have been set for the period 2015 – 2030, known as the 2030 Agenda, which propounds shared responsibility and prosperity and sets the blueprint to achieve a better and more sustainable future for all.

The Prime Minister of India, Narendra Modi, laid the foundation for an inclusive policy for development through its *"sab ka sath, sab ka vikas"* or *"development with all, and for all"*. This synchronizes very well with the SDGs. With a population of $1/6^{th}$ of the planet, India is set to play a crucial global role in executing the task to achieve success of the goals.

Towards this end, the NDA Government of India, in 2015, established the NITI Aayog, a public policy think tank made up of all State Chief Ministers, Lieutenant Governors, a CEO, ex-official members, part-time members, and a Vice-Chairman duly nominated by the Prime Minister.

The NITI Aayog, has delineated various schemes relating them to the Sustainable Development Goals and their objectives. Keeping people's best interests in mind and ensuring that nobody is ignored or neglected, State governments play a huge and decisive role in the country's success in meeting the SDG objectives through its various primary schemes such as Swachh Bharat, Make in India, Skill India, and Digital India with local governments in India directly involved in fifteen of the seventeen SDGs.

II. SIGNIFICANCE OF WATER IN INDIA THROUGH THE AGES

The Vedas, dating back over 8000 years, are the most sacred, complete, and comprehensive scriptures of Hinduism. They are veritable treasure vaults to wisdom and spiritual knowledge. A subject covered extensively in the Vedas is the importance of water, be it its medicinal properties, or its use to achieve physical and spiritual purity. The Rig-Veda hails water as the reservoir of all curative medicines.
Water is an essential and integral part of every social aspect of Indian culture. This is seen in temples where Divine water is consumed after puja (worship), and the water is offered to devotees for consumption; deities in temples are sprinkled with water; plantain leaves, which are traditionally used as plates, are wiped clean with water and a prayer is chanted.

People from all over India and even many from all over the globe take a dip in the River Ganga, considered as a holy river. A holy dip in the river denotes purification and rejuvenation of the soul and mind.

All the ancient rivers of India – Godavari, Cauvery, Brahamaputra, Narmada, Indus, Krishna, and Mahanadi – occupy a very special and saintly place in Indian culture. Invariably the shores of these rivers are covered with lush agriculture and plantations. River Cauvery,

for instance, has always historically correlated with the culture and tradition of the state of Tamil Nadu and is revered as a mother since she aids in the sustenance of agriculture, the very life-source of the farmers and hence the government.

Water is essential to life. Cities are built around it. It's a known fact that there can be no life without water. While human life is dependent on earth, water, fire, air, and space, water is considered as the most vital and essential for existence. Water is necessary for clarity and freshness of the mind.

Thousands of years ago, ancient Bharat laid out a most extensive and exhaustive system of water management across the country. '*Ery*' or tank management was adopted to store both rain and river water. It worked as a barrage to control floods, stock water for cultivation, reduce erosion of soil, and recharge ground water.

Jhalaras or rectangular step-wells were built to absorb seepage from an upstream reservoir or lake. These formed a supply channel to distribute water ceremonies and community use. *Bawaris,* another form of stepwell, were set up to store water that seeped through the ground, thus raising ground water levels. The step wells were cleverly designed where sets of layered steps were built around the reservoirs. This helped to narrow and deepen the wells to minimize water vaporization.

Baolis are step wells for storage and distribution, ornately carved with beautiful motifs and arches and are found in the arid northwestern region of the country.
Talabs, another form of reservoir, were built for community consumption. They were also called Talai, Bandhi, and Sagar or Samand.

Johads are small earthen barrages, called Madaka*s* in Karnataka and *Pemghara* in Odisha, used in ancient times to conserve water and recharge it too. In Kerala, these barrages are made of huge wooden cylinders made of natural palm stems.

Kunds, a saucer shaped drainage basin, are found in the sandy belts of western Rajasthan and Gujarat.

Nadis are village ponds that store infrequent rainfall. In Tuticorin and Kanyakumari, huge brass vessels are used to collect rainwater. These are stored in their houses and boiled later for consumption. The people of Kerala also store and boil rainwater infused with cumin seeds for their medicinal properties.

Our ancestors had a collective vision of the ancient wisdom of water conservation, which would benefit the generations to follow. These ancient techniques provide a ready blueprint for a modern adaptation to conserve, store, and purify water.

III. SDG14 – LIFE BELOW WATER

SDG14, Life Below Water elucidates the conservation and sustained use of the oceans, seas, and marine resources for sustainable development. Though we dwell on land, we are highly dependent on our oceans in more ways than one. Oceans cover almost $3/4^{th}$ of

the surface of the earth and contain 97% of the its water. 40% of the carbon dioxide emitted by humans are absorbed by the oceans, thus helping to control the fallout of global warming.

With over three billion people depending on marine and coastal diversity for their very existence, and besides serving as the world's largest source of protein, the market value, globally, for marine and coastal resources is about 5% of the global GDP, about USD 3 trillion annually.

It is interesting that 95% of the ocean remains a mystery, and that we are yet to know and classify about 91% of species found in the oceans.

Oceans play a pivotal role in making the earth habitable. Seas and oceans are responsible for regulating the weather and climate. They control rainwater and drinking water. They monitor the coastlines and food. They determine the amount and quality of oxygen in the air that we breathe. Over time immemorial, seas and oceans have been the heart of trade and transportation the world over.

There are 5 factors that threaten to sustain the oceans. These are overfishing, coastal habitat loss, pollution, invasive species, and ocean acidification. Sustainable Development Goal 14 is committed to bringing the world together to collectively work towards protecting the oceans and thereby the lives that depend on it.

India is blessed with an enviably long coastline of about 7517 kms. With the country being the largest producer and supplier of fish, it provides much-needed succor to about 250 million people.

In order to preserve the marine ecosystem, the India has undertaken a National Plan for the Conservation of Aquatic for the protection of coastal and marine biodiversity. This includes prevention and reduction of marine pollution, strengthen the resilience of the marine and coastal ecosystems, minimize ocean acidification through scientific means, regulate the excessive practice of harvesting that causes harm to the fishing ecosystem, implement scientific management plans, conserve coastal and marine areas that are legally permissible, judicious use of fisheries subsidies, increase economic benefits to small island developing states and least developed countries, educate with scientific knowledge, provide research opportunities and capacities, and amplify efforts to prevent irresponsible use of oceans and their resources. To achieve this, international law as stipulated in United Nations Convention on the Law of the Sea (UNCLOS) is being implemented.

Marine pollution is being monitored at various points along the country's coastline, using the Coastline Ocean Monitoring and Prediction System, as stipulated by MARPOL (International Convention on Prevention of Marine Pollution) to which India is a signatory.

Under the Department of Fisheries created by the Government of India, major schemes and programs have been launched like the Blue Revolution, Fisheries and Aquaculture Infrastructure Development Fund (FIDF), the Kisan Credit Cards (KCC) extended to fishermen and fish farmers to meet their working capital requirements, empowerment of traditional deep-sea fish men by giving them new skills, and more.

The Sagarmala Project, also known as the Blue Revolution, initiated by the Indian Government, has focused its efforts at upgrading the state of India's ports and coastlines and has established the National Plan for the Conservation of Aquatic Ecosystems.

The Blue Revolution refers to the new emerging concept of Aquaculture, which is a critical and highly successful agricultural activity. It encompasses all forms of active culturing of aquatic animals and plants that exist in marine and fresh waters, thus providing nutritious crops for human consumption while sustaining and protecting marine life at the same time. The project is designed to bring 42,632 hectares of land under the aquaculture scheme. Besides, 3477 Sagar Mitras and 500 Fish Farmer Producer Organizations have conceived of and agreed on a plan to involve youth in the fisheries industry. In 2018-19, India ranked second in the world for aquaculture production.

The western Indian State of Gujarat has proven to be a pioneer in successfully adopting the strategy of port-led development. Various developmental projects can be undertaken under the Sagarmala scheme, such as the urbanization of ports, waterways transportation, coastal tourism, ship building, different kinds of shipping, logistics zones and services, connecting with distant regions, specialization of ports in certain economic activities, offshore renewable energy projects, modernizing existing ports and development of new ports, and more.

ISRO's NAVIC systems have provided massive technological support and have aided in fishing area exploration. This has helped boost India's fish production.
A Mangrove For the Future (MFF) is a very special and distinctive initiative adopted to provide a stage for collaboration among various agencies, sectors, and countries to address the challenges to coastal ecosystem and livelihood issues, while at the same time promote investments for sustainable development.
One of the plans of the Government of India is also to use the SDG14 to address wastewater management in rural communities.

IV. BLUE ECONOMY

The idea of 'blue economy' was first articulated by Dr. Gunter Pauli in 2010 in his book "The Blue Economy: 10 years, 100 innovations, 100 million jobs". Based on the powerful concept of the Blue Economy, it has been integrated in the Indian Ocean region, where emphasis is on using locally available resources and renewable inputs. This would take care of the issues of resource scarcity and thus enable sustainable development.

The 21st century is all set to witness the Indian Ocean as a key player in the adoption of the idea of the blue economy to bring about prosperity and development.

Prime Minister Narendra Modi has laid emphasis on the importance and need for protecting shared marine spaces for "Security and Growth for All in the Region" using Blue Economy as the tool for its implementation. This reiteration from the Prime Minister of India holds enormous significance in the light of the relevance of the Indian Ocean. The Ocean-based Blue Economy is the next sunrise issue for development experts. The seas have historically connected and bonded the Indian Ocean States. However, the diversity in terms of the size of the country, the population numbers, natural resources, and the cultural heterogeneity, is likely to pose a challenge to effective regional cooperation.

Since time immemorial, the Indian Ocean region has provided both a unique ecosystem as well as important connectivity routes to its various resources. Therefore, stakeholders need to put in a collective effort towards a sustainable growth of Blue Economy. Alongside, it is important to explore existing laws and policies for food security and sustainable management for better governance in the region.

Recently, the Ministry of Earth Sciences (MoES) of the Government of India opened its doors to all stakeholders, from industries to NGOs to academia to citizens, to bring in their suggestions, ideas, and inputs to the table in their efforts to draft the Blue Economy policy for the country. This policy aims to outline the vision and possible strategies that can be adopted for the responsible utilization of the ocean resources available in the country.

Despite the challenges Covid-19 brought, and the consequent operational disarray, the Indian economy, barring short to medium fluctuations, has shown enormous promise. It has brought in new policies and actions that can provide a fresh momentum to Indian growth and development.

India is, inarguably, the world's largest democracy and by far, one of the fastest growing economies. Its next success story may well come from the domain of the Blue Economy. The new vision will open several doors to revitalize the economic reforms in India and explore the deep economic potential India possesses. And, importantly, a cleaner future will help bring in the Environmental, Social, and Governance (ESG) equation to play. While the world will be watching closely at India's actions and response to the sustainable development needs, India could well become not merely the frontrunner but the leader in the sustainable development of life below water. The Blue Economy is all set to launch India as a hope for the world.

REFERENCES

[1] Oceans – United Nations Sustainable Development Goals
[2] https://www.un.org/sustainabledevelopment/oceans/
[3] Sustainable Development Goal 14
[4] https://en.wikipedia.org/wiki/Sustainable_Development_Goal_14
[5] Life Below Water – Mongabay - https://imgs.mongabay.com/wp-
[6] content/uploads/sites/30/2020/02/27182720/Bhatta_SDG-14-report.pdf
[7] Sagar Mala Project - https://en.wikipedia.org/wiki/Sagar_Mala_project
[8] Sustainable Development Goals: SDG14 – Life Below Water
[9] http://ielaind.org/wp-content/uploads/2020/09/SDG-14-Life-Below-Water.pdf
[10] Conservation of Life Below Water
[11] https://www.keralauniversity.ac.in/pdfs/news/Life-below-water-
[12] Final_comp1614589041.pdf
[13] Making India a Blue Economy
[14] https://pib.gov.in/PressReleasePage.aspx?PRID=1809728
[15] Ocean based Blue Economy – NITI Aayog
[16] https://www.niti.gov.in/writereaddata/files/document_publication/Indian%20Ocea
[17] n%20Region_v6%281%29.pdf
[18] Importance of Blue Economy – Drishti IAS - https://www.drishtiias.com/daily-
[19] updates/daily-news-editorials/importance-of-blue-economy
[20] How blue economy can help rewrite India's growth story post pandemic
[21] https://www.firstpost.com/opinion/how-blue-economy-can-help-rewrite-
[22] indias-growth-story-post-pandemic-10492831.html

[23] Blue Economy in the Indian Ocean: Governance perspectives for sustainable
[24] development in the region - https://www.orfonline.org/research/blue-
[25] economy-in-the-indian-ocean-governance-perspectives-for-sustainable-
[26] development-in-the-region-47449/
[27] SDG India Index: Odisha Tops the List in 'Life Below Water'
[28] https://ommcomnews.com/odisha-news/sdg-india-index-odisha-tops-the-list-
[29] in-life-below-water
[30] Blue Economy Policy – Press Information Bureau
[31] https://pib.gov.in/PressReleseDetailm.aspx?PRID=1698608
[32] Goal 14: Life Below Water / UNEP – UN Environment Programme
[33] https://www.unep.org/explore-topics/sustainable-development-goals/why-do-
[34] sustainable-development-goals-matter/goal-14
[35] SDG India Index 2020-21: NITI Aayog – Drishti IAS
[36] https://www.drishtiias.com/daily-updates/daily-news-analysis/sdg-india-index-
[37] 2020-21-niti-aayog
[38] Life Below Water: Sustainable Develop Goal 14
[39] https://seabedhabitats.org/2016/07/30/life-below-water-sustainable-
[40] development-goal-14/
[41] The Blue Economy: 10 Years, 100 Innovations, 100 Million Jobs – Dr. Gunter
[42] Pauli; Academic Foundation Pub. 2015
[43] Sacredness of Water – Dr. Lalita Namjoshi - standrewscollege.ac.in › Cardinal-
[44] Paul-Poupard-2011-Sacredness-water
[45] http://117.252.14.242/rbis/vedic.htm
[46] The Role of water in Vedic Activities, IJAR – Worldwide Journals
[47] www.worldwidejournals.com>article>the-role-of-water-in-vedic=activities
[48] The role of water in Indian culture - https://hekint.org/2018/07/09/the-role-of-
[49] water-in-indian-culture/

