

Life below water – Global Goals and India.

Authors:

1. Dr. Shridhar Rajpathak, Associate Professor – SBU, Pune (India) and Director- Garware Technical Fibres Ltd. Pune (India)
2. Reema Sathe, Founder, 'Happy Roots, Consultant- Agri. Supply Chain, Gender Equality in Agriculture. President Award Winner, '16-Rural Development'.
3. Prof. Meenakshi Singh, Senior Assistant Professor, SBU, Pune (India)

Abstract:

Healthy oceans and seas are essential to our existence. They cover 70 percent of our planet and we rely on them for food, energy and water. Yet, we have managed to do tremendous damage to these precious resources. We must protect them by eliminating pollution and overfishing and immediately start to responsibly manage and protect all marine life around the world.

Everyone is responsible for to make sure that we meet the Global Goals. Following 10 targets to create action to conserve and sustainably use the oceans, such as (1) Reduce Marine Pollution, (2) Protect & Restore Ecosystem, (3) Reduce ocean Acidification, (4) Sustainable Fishing, (5) Conserve coastal & Marine areas, (6) End subsidies contributing to overfishing, (7) Increase the Economic benefits from sustainable use of Marine Resources, (8) Increase scientific knowledge, Research & Technology for Ocean Health, ((9) Support Small Scale Fisheries, (10) Implement & Enforce International Sea Law.

SDG, is commonly popular as Global Goals, build on the success of the Millennium Development Goals (MDGs) and aim to go further to end all forms of poverty. India is fully committed to follow. India has made steady progress towards achieving the United Nations' Sustainable Development Goals (SDGs) in areas of health, energy, and infrastructure, as per NITI Aayog's latest SDG India Index.

Overall objective of this paper to understand this interesting subject, role of UN and how India is responsibly responding to maintain sustainability in this sector.

Key words:

SDG, MDGs, Sustainability, Global Goals, Fishing, Aquaculture, IUU, PMMSY

1. Overview of SDG (Sustainable Development Goals)

The Sustainable Development Goals (SDGs) define the world we want. They apply to all nations and mean, quite simply, to ensure that no one is left behind. ... The 17 Sustainable Development Goals ARE the 2030 Agenda, the map of the world we seek. The Sustainable Development Goals and targets are integrated and indivisible, global in nature and universally applicable, taking into account different national realities, capacities and levels of development and respecting national policies and priorities. Targets are defined as aspirational and global, with each Government setting its own national targets guided by the global level of ambition but taking into account national circumstances. Each Government will also decide how these aspirational and global targets should be incorporated into national planning processes, policies and strategies. It is important to recognize the link between sustainable development and other relevant ongoing processes in the economic, social and environmental fields.

Goal No	Goal Description
Goal 1	End poverty in all its forms everywhere
Goal 2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
Goal 3	Ensure healthy lives and promote well-being for all at all ages
Goal 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 5	Achieve gender equality and empower all women and girls
Goal 6	Ensure availability and sustainable management of water and sanitation for all
Goal 7	Ensure access to affordable, reliable, sustainable and modern energy for all
Goal 8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Goal 10	Reduce inequality within and among countries
Goal 11	Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 12	Ensure sustainable consumption and production patterns
Goal 13	Take urgent action to combat climate change and its impacts
Goal 14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development
Goal 15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
Goal 17	Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development



Source: Sustainable Development Report, 2019

2. Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Main aim under goal 14 is to prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution by 2025. It is decided mutually to sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans by 2020.

It is important to minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels & task set to effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics by 2020.

Conserving at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information is one of the focus to be accomplished by 2020.

Prohibiting certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.

By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism. It is essential to increase scientific knowledge, develop research capacity and transfer marine technology, taking into

account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular Small Island developing States and least developed countries. Also providing the access for small-scale artisanal fishers to marine resources, markets and enhancing the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea will provide the legal framework for the conservation and sustainable use of oceans and their resources.

3. Role and Contribution of FAO in achieving SDG 14

Code of Conduct for Responsible Fisheries (CCRF)

It's a Negotiated instrument. Back in 1995, FAO member countries drafted, negotiated and adopted a forward-looking instrument that seized upon the growing global interest in sustainable development. The Code, which consists of a collection of principles, goals and elements for action, took more than two years to elaborate, involving representatives from members of FAO, inter-governmental organizations, the fishing industry and non-governmental organizations. The Code represents a global consensus on a wide range of fisheries and aquaculture issues. It lays forth principles of sustainable fisheries and aquaculture management. The Code's principles have given rise to various instruments that seek to improve the conservation, management and development of the fisheries and aquaculture sector. Member countries and all those involved in fisheries and aquaculture have been working to implement the Code through their policies. FAO is responsible for monitoring implementation and supporting countries in their efforts to implement the Code, providing capacity support when necessary.

The Code of Conduct for Responsible Fisheries

provides principles and standards applicable to the conservation, management and development of all fisheries, including:



Source: FAO Working for SDG 14 (Report), 2017

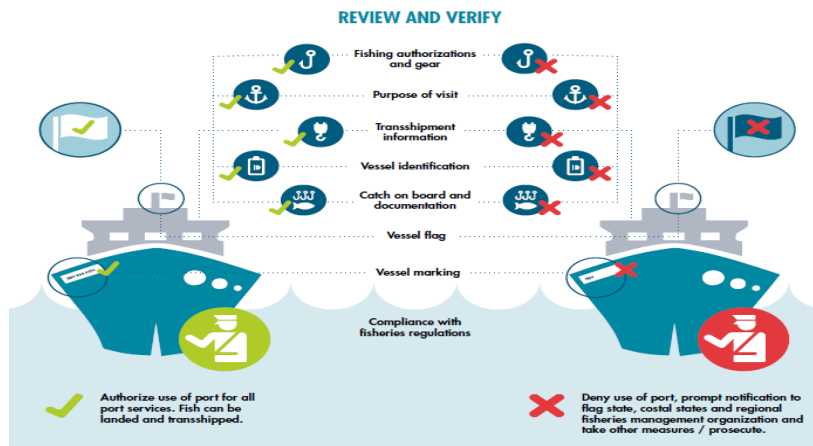
4. FAO Port State Measure Agreement to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing

It's a negotiated international treaty. It prevents illegally caught fish from entering international markets through ports. Illegal, unreported, and unregulated (IUU) fishing is believed to represent 20 percent of total catches per year. Estimates place the cost of illegal fishing between USD 10–23 billion annually. In 2009, FAO's Port State Measures Agreement to Prevent, Deter and Eliminate Illegal, Unreported, and Unregulated Fishing was adopted by member countries and on 5 June 2016, it has officially entered into force as an international treaty. Its ratification and entry into force was a tremendous achievement, and one that could only have been reached in this current environment of international collaboration on oceans. The Agreement itself recognizes the special requirements of developing states and includes provisions to establish funding mechanisms for implementation to countries that have become Party to the Agreement. These mechanisms are intended to be directed towards developing and enhancing capacity for monitoring, control and surveillance and compliance activities relevant to port state measures, as well as training for port managers, inspectors and enforcement and legal personnel. The Agreement promotes

collaboration between fishers, port authorities, coast guards and navies to strengthen inspections and control procedures at ports and on vessels.

The Port State Measures Agreement is a cost-effective and efficient manner to combat IUU fishing by preventing vessels engaged in IUU fishing from using ports.

Two foreign vessels request entry to a port in a country that adheres to the Port State Measures Agreement:



Source: FAO Working for SDG 14 (Report), 2017

5. Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels

It's a State (country) certified repository of vessels involved in fishing. It provides a tool for eliminating illegal fishing. The Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels (Global Record) emerged from a process begun in 2005 with the adoption of the Rome Declaration on illegal, unreported and unregulated (IUU) fishing. The Global Record is a single tool in which state authorities and regional fisheries management organizations compile information about all vessels authorized for fishing operations in their countries or regions. Each vessel is registered into the database with a unique vessel identifier (UVI), which remains with a vessel throughout its lifespan, regardless of change of the vessel's name, ownership or flag. The database is crucial for the work of inspectors, port state authorities and flag state authorities, making it easier to identify vessels not regularly identified and registered by the proper national and regional authorities.

6. The Voluntary Guidelines for Catch Documentation Schemes

These are negotiated voluntary guidelines. It provides better and more harmonized traceability of fish along the value chain. The Voluntary Guidelines for Catch Documentation

Schemes are aimed at combating, illegal, unregulated and unreported (IUU) fishing. Catch documentation schemes are tracking and tracing systems that monitor the fish from the point of catch through the whole supply chain to its final destination, thereby documenting the legality of the seafood catch. A five-year negotiation process led by FAO successfully carried out the task set out for it in the Fisheries Resolution adopted by the United Nations General Assembly in December 2013 and the guidelines were unanimously approved in 2017 by a member country-driven FAO technical committee. These guidelines were presented for endorsement by the FAO Conference in July 2017.

7. Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the context of Food Security and Poverty Eradication

These are negotiated voluntary guidelines. It recognizes and supports the important role of small-scale fishing communities. In 2014, FAO's Committee on Fisheries adopted Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food security and Poverty Eradication. The Guidelines are the first internationally agreed instrument for the small-scale fisheries sector. This ground-breaking instrument recognizes the key role small-scale fishing communities – comprising more than 90 percent of the world's capture fishers and fish workers – play in contributing to poverty alleviation and food security. The Guidelines support investing in health, literacy, and education, eradicating forced labour, promoting social security protection, mandating gender mainstreaming, and building fisheries' resistance to climate change and extreme weather events. FAO supports countries as they work towards implementing the Voluntary Guidelines in their national policies and programmes.

8. The Nansen Research Vessel

It is a marine research programme conducting marine research in developing countries for their benefit. Over four decades ago, the Government of Norway and FAO began a collaboration, to create a marine research partnership that was far ahead of its time. In the 1970s and 1980s, before environmental awareness was widespread, scientists on the *Nansen* embarked on survey voyages around the globe, measuring the health of our oceans. The only marine research vessel to fly the UN flag, the R/V *Dr.Fridtjof Nansen* has carried out its research primarily in Africa but also in Asia, in some of the least observed waters on the planet.

Nansen surveys provide a platform for many developing countries that lack the proper infrastructure to conduct such marine research independently. All of the collected data are input into a dedicated database and made available to the countries and regions. This unique partnership allows many developing countries to achieve their efforts of managing sustainable fisheries and to obtain critical information key to their reporting on SDG 14 achievements. The newest Nansen vessel, the third since the start of this programme, launched in Oslo's harbour on 24 March 2017. The new *Nansen* is the most advanced marine research vessel of its kind and new laboratories facilitate research in climate change and the study of marine plastics in addition to its fisheries management research activities.

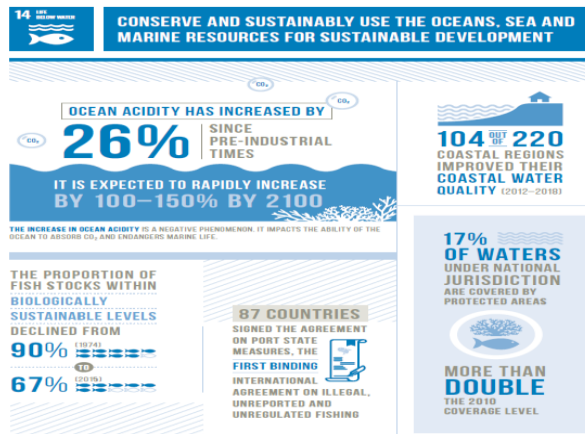
9. Guidelines on Eco labeling in Fisheries and Aquaculture

The Guidelines for the Ecolabelling of Fish and Fishery Products from Inland Capture Fisheries are of a voluntary nature and published in the year 2011 whereas the Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries were published originally in the year 2005 followed by revision 1 in the year 2009. They are applicable to ecolabelling schemes that are designed to certify and promote labels for products from well-managed capture fisheries and focus on issues related to the sustainable use of fisheries resources. The Technical Guidelines on Aquaculture Certification have been developed by FAO upon the request of its Members attending the 3rd Session of the Committee on Fisheries (COFI) Sub-Committee on Aquaculture, held in India from 4-8 September 2006 and it has been approved by the 29th Session of COFI, held in Rome from 31 January to 4 February 2011. The guidelines provide advice on developing, organizing and implementing credible aquaculture certification schemes.

10. Present Global Status of SDG 14

Life depends on oceans. They make up the planet's largest ecosystem— covering more than two thirds of the Earth's surface— and provide billions of people with food and livelihoods. Oceans produce about half the oxygen we breathe, and act as a climate regulator, absorbing atmospheric heat and more than one quarter of man-made CO₂. However, decades of increasing carbon emissions have led to a build-up of heat in the oceans and changes in their

chemical composition. The resulting adverse effects of ocean acidification, climate change (including sea-level rise), extreme weather events and coastal erosion exacerbate ongoing threats to marine and coastal resources from overfishing, pollution and habitat degradation. Protected areas and policies and treaties that encourage responsible extraction of ocean resources are critical to confronting these threats.



source: The Sustainable Development Goals Report 2019

The expansion of protected areas for marine biodiversity and existing policies and treaties that encourage responsible use of ocean resources are still insufficient to combat the adverse effects of overfishing, growing ocean acidification due to climate change and worsening coastal eutrophication. As billions of people depend on oceans for their livelihood and food source and on the transboundary nature of oceans, increased efforts and interventions are needed to conserve and sustainably use ocean resources at all levels. Protected areas play a critical role in sustainable development if they are both effectively managed and located in areas important for biodiversity. As of December 2018, 17 per cent of waters under national jurisdiction were covered by protected areas. This is a significant increase from 12 per cent in 2015 and more than double the coverage level in 2010. The mean percentage of marine key biodiversity areas (KBAs) covered by protected areas also increased from 31.2 per cent in 2000 to 45.7 per cent in 2018.

Coastal areas worldwide are affected by land-based pollutants, including sewage and nutrient runoff, leading to coastal eutrophication, degraded water quality and the impairment of coastal marine ecosystems. Analysis of the clean water indicator, a measurement of the degree of ocean pollution, shows that water quality challenges are widespread, but are most

acute in some equatorial zones, especially in parts of Asia, Africa and Central America. Nearly all countries have room to improve their coastal water quality. Analysis of trends from 2012 to 2018 shows that positive change is indeed possible: 104 of 220 coastal regions improved their coastal water quality over that period. Such improvements require policy commitments at the country level to expand access to wastewater treatment and to reduce chemical and nutrient runoff from agricultural sources, along with global commitments to reduce plastic debris.

Ocean acidification is caused by the uptake of atmospheric CO₂ by the ocean, which changes the chemical composition of the seawater. Long-term observations of ocean acidification over the past 30 years have shown an average increase of acidity of 26 per cent since pre-industrial times, and at this rate, an increase of 100 to 150 per cent is predicted by the end of the century, with serious consequences for marine life. Ocean acidification threatens organisms as well as ecosystem services, including food security, by endangering fisheries and aquaculture. It also impacts coastal protection (by weakening coral reefs, which shield the coastline), transportation and tourism. As the acidity of the ocean rises, its capacity to absorb CO₂ from the atmosphere decreases, hampering the ocean's role in moderating climate change.

To achieve sustainable development of fisheries and to preserve the health and productivity of fisheries, fish stocks must be maintained at a biologically sustainable level. Overfishing not only reduces food production, but also impairs the functioning of ecosystems and reduces biodiversity, with negative repercussions for the economy and society. Analyses reveal that the fraction of world marine fish stocks that are within biologically sustainable levels declined from 90 per cent in 1974 to 67 per cent in 2015. However, this decreasing trend appears to have stabilized since 2008—an encouraging sign. In 2015, the Mediterranean and Black Sea region had the lowest percentage of sustainable fish stocks (37.8 per cent), followed closely by the Southeast Pacific region (38.5 per cent). In contrast, the Eastern Central Pacific and Northeast Pacific regions had the highest proportion of fish stocks at biologically sustainable levels (above 85 per cent). More focused efforts are needed to rebuild overfished stocks, particularly in severely depleted regions.

As of December 2018, over 24 million km² (17.2 per cent) of waters under national jurisdiction (0–200 nautical miles from a national border) were covered by protected areas, a

significant increase from 12 per cent in 2015 and more than double the extent covered in 2010. The global mean percentage of each marine key biodiversity area covered by protected areas increased from 31.2 per cent in 2000 to 44.7 per cent in 2015 and to 45.7 per cent in 2018.

Illegal, unreported and unregulated fishing remains one of the greatest threats to sustainable fisheries, the livelihoods of those who depend upon them and marine ecosystems. A framework of international instruments has been developed that addresses different aspects of fisheries management. Most countries have taken measures to combat such fishing and have adopted an increasing number of fisheries management instruments in the past decade. For example, the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, the first international binding agreement to combat such fishing, entered into force in June 2016. The number of parties to the Agreement has rapidly increased and stood at 58 as of February 2019.

Small-scale fisheries are present in almost all countries, accounting for more than half of total production on average, in terms of both quantity and value. To promote small-scale fishers' access to productive resources, services and markets, most countries have developed targeted regulatory and institutional frameworks. However, more than 20 per cent of countries have a low to medium level of implementation of such frameworks, particularly in Oceania and Central and South Asia.

11. Sustainable Development Goals and India

As the fastest growing major economy of the world, today, India is uniquely placed to deliver on its commitments to inclusive and sustainable development. Externally the country has played a key role in shaping the SDGs and ensuring the balance among its three pillars - economic, social and environmental. Internally, it has launched many programs to make progress towards these goals. Notwithstanding its scarce financial resources due to relatively low per-capita income, large population and vast geographical expanse, India is committed to achieving within a short period such ambitious goals as universal rural electrification, road and digital connectivity for all, massive expansions of clean and renewable energy, sanitation and housing for all and universal elementary school education. Taking cue from the memorable phrase "*SabkaSaath, SabkaVikas*", translated as "Collective Effort, Inclusive Development" and enunciated by the Prime Minister, stakeholders from various walks of life

- central and state governments, industry, civil society, technical experts and academics - are coming together to promote a better future for the country.

Even as it combats poverty, India remains committed to protecting the environment. Under its Nationally Determined Contributions, India has ambitiously committed to reducing the emissions intensity per unit of GDP by 33% -35% by 2030 relative to its 2005 levels. Furthermore, it plans to create an additional carbon sink of 2.5-3 billion tonnes through additional tree cover.

Reinforcing India's commitment to the national development agenda and SDGs, the country's Parliament has organized several forums to develop policy and action perspectives on elimination of poverty, promoting gender equality and addressing climate change. The NITI Aayog, with the Prime Minister as its chairperson, is to provide the overall coordination and leadership. The institution has carried out a detailed mapping of the 17 Goals and 169 targets to Nodal Central Ministries, Centrally Sponsored Schemes and major government initiatives. Most sub-national governments have carried out a similar mapping of the SDGs and targets to the departments and programmes in their respective states.

12. India's Philosophy of 'One World' and Global Partnership for the SDGs

Cooperation is inherent to India's civilizational values. The country has been appreciated by all stakeholders for its role in shaping the global agenda on economic development. India recognizes that the promotion of global wellbeing requires institutionalizing the concept of 'one world' through partnerships based on solidarity, equity and sharing.

In alignment with this philosophy, India's Prime Minister launched the International Solar Alliance at the UN Climate Change Conference in Paris in 2015. The Alliance promotes cooperation among 121 countries with the objective of reducing the price of solar energy. This is to be accomplished through standardization of solar technologies and boosting research and development.

Additionally, India has provided platforms like the India-Africa Forum Summit and BRICS Summit for facilitating meaningful dialogue among nations. Beyond bilateral engagements that have been strengthened, focusing on norm setting at multilateral institutions and strengthening the United Nations has also been an important priority. Finally, India continues

to play a significant role in development cooperation in its immediate and extended neighbourhood.

13. The Indian Parliament in Action

The Parliament of India has taken exemplary initiatives to propel the SDG agenda forward. The Lower House of the Parliament, for instance, has organized several discussions on the SDGs with parliamentarians from both Houses as part of the Speaker's Research Initiative. A number of the initiatives have focused on the importance of gender equity in the context of the SDGs. These include the National Women's Legislators' Conference as well as the second BRICS Women Parliamentarians Forum. The Forum observed that women parliamentarians can make a significant contribution towards shaping public opinion in favor of the new global development goals. The Forum brought out the 'Jaipur Declaration' expressing its commitment to the SDGs. The South Asian Speakers' Summit on SDGs was another regional initiative organized in 2017. The Summit deliberated on the theme 'Strengthening Regional Cooperation and Resources for SDGs'. It urged parliamentarians to collectively advance action among all stakeholders for mobilizing additional resources in order to achieve the SDG targets in a timely manner.

14. Leave No One Behind

At the core of this global agenda for 2030 is the principle of universality: 'Leave No One Behind'. It is critical to the implementation of these targets that they should be relevant to all governments and actors. Development in all its dimensions must be inclusive of all people, everywhere, and should be built through the participation of everyone, especially the most vulnerable and marginalised.

15. National Action on the SDGs in India

The Government of India's premier think tank, NITI Ayog, has been entrusted with the task of coordinating the SDGs. NITI Aayog has undertaken the overall planning as they relate to the SDGs and their targets, and has identified lead and supporting ministries for each target. They have adopted a government-wide approach to sustainable development, emphasising the interconnected nature of the SDGs across economic, social and environmental pillars.

States have been advised to undertake a similar mapping of their schemes, including centrally sponsored schemes.

In addition, the Ministry of Statistics and Programme Implementation has been leading discussions for developing national indicators for the SDGs. State governments are key to India's progress on the SDG Agenda and several of them have already initiated action on implementing the SDGs.

16. UN Support for Localising the SDGs

Supporting the consultative process, post-2015

Advocating the broad-based consultative process that characterises the new global agenda process, the United Nations in India supported the participation of civil society organisations, think tanks and the Indian media in discussions at intergovernmental negotiations, seminars on financing for development and sustainable development and side sessions at the International Conference on Financing for Development at Addis Ababa and during the General Assembly in New York.

17. Strategic support to address the interconnectedness of issues

The UN Country Team in India supports NITI Aayog in its efforts to address the interconnectedness of the goals, to ensure that no one is left behind and to advocate for adequate financing to achieve the SDGs. In close collaboration with NITI Aayog and partners, the UN has supported thematic consultations on the SDGs to bring together various state governments, central ministries, civil society organisations and academia to deliberate on specific SDGs.

18. Support to State Governments

The UN in India currently supports state governments in localising the SDGs to address key development challenges at the state level.

19. State Governments are a crucial driving force for SDG progress

State governments are key to India's progress on the SDG Agenda as they are best placed to 'put people first' and to ensuring that 'no one is left behind'. Many of the Government's flagship programmes such as [*Swachh Bharat*](#), [*Make in India*](#), [*Skill India*](#), and [*Digital India*](#) are at the core of the SDGs. State and local governments play a pivotal role in many of

these programmes. The role of local governments is equally important; 15 of the 17 SDGs directly relate to activities undertaken by local governments in the country. State governments are paying keen attention to visioning, planning, budgeting, and developing implementation and monitoring systems for the SDGs.

20. State-Level Initiatives on Sustainable Development Goals in India

Assam has set up a Centre for SDGs under the Planning and Development Department and an integrated framework for implementation has been adopted. The Government of **Assam** approached SDGs as a single synergized initiative which underpinned the government's efforts to take a whole-of-government approach. It has institutionalized SDG-oriented planning, and has aligned budgets to SDGs. The state has also developed its own vision for realizing the SDGs, namely, ASSAM 2030. A pilot is being undertaken in a few villages and towns for demonstrating full attainment of the SDG agenda. Further, a robust technology platform is also being set up for tracking the progress pertaining to the SDGs.

Andhra Pradesh as part of its Vision 2029 has identified indicators for each of the 17 SDGs. It has also outlined the baseline, targets, milestones as well as key strategies for realizing the SDGs.

Arunachal Pradesh has merged the Department of Finance and the Department of Planning into one single department – the Department of Finance, Planning and Investment. The preparation of the State Annual Development Agenda ensures that there are no overlaps amongst various departments harnessing synergies for SDGs.

Bihar is in the process of finalizing the roadmap for SDG implementation. The state government is already focusing on a number of areas that are covered under the SDGs including road connectivity and drainage, toilets, clean drinking water, electricity, higher education, skill development and gender equality. They followed a consultative process for preparation of the SDG Action Plan 2020-25 involving all departments.

Chhattisgarh State Planning Commission has been designated as the nodal agency for SDG implementation and monitoring. The Commission has initiated efforts towards establishing an 'SDG Cell' under its overall guidance and supervision.

Gujarat prepared a roadmap for implementation of SDGs and a Role Matrix which clearly identifies roles and responsibilities of various stakeholders.

Haryana has prepared its Vision 2030 document following extensive consultations with a range of stakeholders. The strategies outlined in the document are based broadly on five principles – integrated planning and decentralized implementation, equitable development, building human capital, promoting citizen centric services and green growth. They have Swarna Jayanti Haryana Institute for Fiscal Management under the State Finance and Planning department to execute the Vision 2030.

Maharashtra is focused on balanced regional development and emphasizes sustainable livelihoods, taking initiative to improve management of water, land and forests, improve access to health and education, and developing skills for employment generation. It has designated a nodal department and mapped schemes to SDGs in three categories depending on their association with SDGs – High, Medium and Low. The State organised a Workshop in collaboration with United Nations in India on 'Enhancing Capacities for Institutionalising SDGs' with the aim of sensitising and building capacities amongst the senior officers of State Government.

Himachal Pradesh followed whole-of-government approach for the preparation of the Vision document for SDGs. Consultations were held not only among the thematic groups formed by the government, but also with farmers, hoteliers, representatives of industry association, and civil society to ensure reflection of diverse voices in the Vision document. Institutional mechanisms have been set up to ensure whole-of-government approach.

Kerala has set up elaborate indicators and standards for achieving the SDG 3 on health. The state has sector specific plans for 2030 with emphasis on encouraging entrepreneurship in production sectors, developing the key bases of knowledge economy in the areas of education, S&T, etc., and ensuring environmental and social sustainability. It has set up an elaborate institutional mechanism to ensure that all government departments come together on a common platform and collaborate with experts and training institutions on the SDG agenda.

Karnataka focuses on technology in 12 sectors: education, medical science and health care, food & agriculture, water, energy, environment, habitat, transportation, infrastructure, manufacturing, materials and ICT. It has constituted Goal-wise committees for every SDG, with departments that contribute to the Goal as members.

Jammu and Kashmir has constituted an Apex Level Committee, headed by the Chief Secretary, to oversee and monitor progress on SDG implementation. The Department of Planning, Development and Monitoring has been designated as the nodal department. An SDG Cell has been constituted in the Directorate of Economics and Statistics.

Jharkhand has designated the Department of Planning- cum-Finance as the nodal department to coordinate implementation of SDGs targets.

Meghalaya has formed an SDG cell for coordinating the preparation of its Vision document and SDG implementation. It has also completed mapping of the government schemes against SDGs which is useful in reflecting synergies among various government departments working together on a common agenda.

Mizoram has designated a nodal department and has set up a dedicated SDG Cell in the Research and Development Branch of Planning and Program Implementation Department.

Nagaland has established an SDG Cell in the Planning and Coordination Department, which is the nodal department in the State. Twenty-three departments have been identified for SDG implementation and nodal officers have been designated.

Tamil Nadu focuses on infrastructure development in six major sectors: energy, transportation, industrial and commercial infrastructure, urban infrastructure and services, agriculture and human development. It has identified a nodal department for SDGs, constituted a high-level committee and formed thematic working groups for SDGs.

Punjab has set up a SDGs Support Unit under the Planning and Development Department. The SDGs Support Unit serves as a conduit for technical support at the state level and acts as a nudge unit for providing evidence, analysis and perspectives to inform public policy in the context of SDGs. It has constituted a high-level Steering Committee to fast-track the implementation of its SDG agenda to achieve the targets fixed under SDGs.

Madhya Pradesh has also established an SDG cell. The Madhya Pradesh State Planning Commission has also established Planning and Policy Support Unit, Project Monitoring Unit, Knowledge Management Unit and International Division, in order to meet challenges of perspective planning and SDGs.

In **Odisha**, an SDG Core Team has been constituted in the nodal department. Additionally, SDG Cells have been created in all the related departments.

Rajasthan has established a 'Centre for SDG implementation' at the Directorate of Economics and Statistics. State and district level committees have been formed for guiding the implementation and monitoring of SDG initiatives.

Telangana has constituted thematic working groups on the five Ps – People, Planet, Prosperity, Peace and Partnerships for SDGs.

Tripura has established a High-level Committee, identified nodal department, and instituted thematic groups for SDGs.

Uttar Pradesh has identified nodal departments for each of the 16 Goals.

Uttarakhand has designated the Directorate of Economic and Statistics as the nodal agency for SDGs in the State and has set up a Centre for Policy and Good Governance (CPPGG) to be the think-tank on SDGs.

West Bengal has developed a State Vision, Mission, Short- and Long-Term plan with targets for 2020, 2025 and 2030 and has designated the Department of Planning and Statistics as the nodal department for coordinating and monitoring SDG implementation in the State.

Andaman and Nicobar Island has mapped all schemes with SDGs and identified departments working on the same. Nodal department has been designated for each SDG. Planning Department is overseeing implementation of SDGs and the Evaluation Cell is monitoring the progress.

In **Chandigarh**, a dedicated team, headed by the Finance Secretary, has been formed to drive the SDG initiatives. The implementing departments of SDGs are working under the Chairpersonship of Advisor to the Administrator.

Delhi has constituted nine thematically clustered working groups under the Administrative Secretaries/Heads of Department of major departments and a Steering Committee under the chairpersonship of the Chief Secretary. The draft Vision 2030 document has been prepared with inputs from subject experts, civil society members, NGOs and academicians.

The **Lakshadweep** administration has designated the Directorate of Planning, Statistics and Taxation as the nodal department for coordinating visioning, implementation, and monitoring of SDGs.

Puducherry has prepared its Vision document aligned to SDGs. A high-level Steering Committee has been constituted for implementation and monitoring of SDGs. The Department of Planning and Research has been identified as the nodal department. The UT has mapped all its schemes and departments against SDGs.

21. SDG India Index

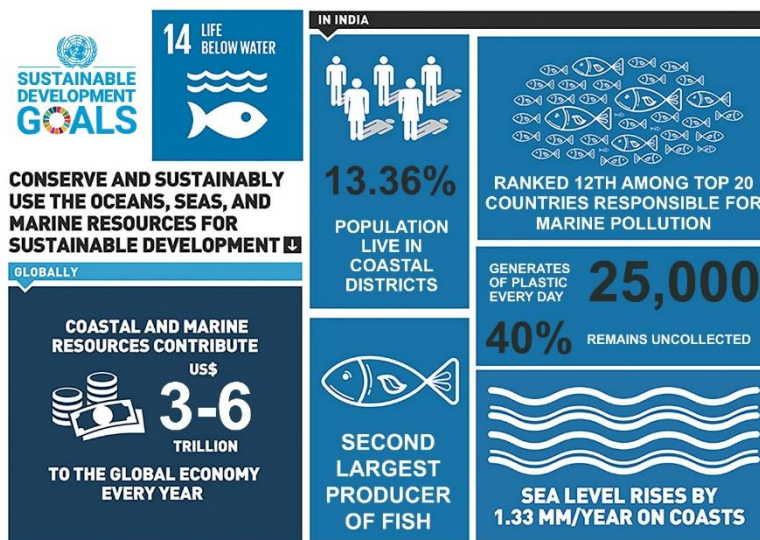
Given the importance accorded by the Government of India to achieving SDGs, NITI Aayog decided to estimate the progress through a single measurable index that would serve as an advocacy tool and trigger action at the State level. NITI Aayog has constructed the SDG India Index spanning across 13 out of 17 SDGs (leaving out Goals 12, 13, 14 and 17). The Index tracks the progress of all the States and UTs on a set of 62 Priority Indicators, measuring their progress on the outcomes of the interventions and schemes of the Government of India. The SDG India Index is intended to provide a holistic view on the social, economic and environmental status of the country and its States and UTs. The SDG India Index is an aggregate measure which can be understood and used by everyone—policymakers, businesses, civil society and the general public. It has been designed to provide an aggregate assessment of the performance of all Indian States and UTs, and to help leaders and change makers evaluate their performance on social, economic and environmental parameters. It aims to measure India and its States' progress towards the SDGs for 2030.

22. Indian Scenario of Goal 14: Conserve and sustainably use the Oceans, Seas and Marine Resources

A clear agenda has been formulated for promoting the 'Blue Revolution'. For tracking the levels of marine pollution along the coastline, the country has developed the Coastal Ocean Monitoring and Prediction System. Additionally, an oil spill management system has been put in place for responding to emergencies arising out of oil spills. Further, the Integrated National Fisheries Action Plan, 2016 is being implemented to promote the livelihoods of fishing communities as well as the ecological integrity of the marine environment. Giving

new impetus to port-led development, the Sagarmalaprogramme is improving port connectivity, port-linked industrialization and coastal community development.

India has taken various steps to protect and enhance the coastal and marine ecosystem. The first Maritime Summit was organized in the country in April 2016. More than 4,500 delegates from across 40 countries participated in the Summit.



Source: <https://in.one.un.org/page/sustainable-development-goals/sdg-14/>

23. Mangroves and Coral Reefs

India has a long history of mangrove forest management. The Sundarbans mangroves, located in the Bay of Bengal, were the first in the world to be put under scientific management. Government of India supports research and development activities with an emphasis on mangrove biodiversity. There has been a net increase of 112 square km in the mangrove cover of the country as compared to the previous assessment. In fact, more than 15,000 ha. of mangroves has been planted in the state of Gujarat alone through active participation of local communities under the Integrated Coastal Zone Management project. Further, India is a part of the regional initiative 'Mangroves for the Future', being coordinated by the United Nations Development Programme and the International Union for Conservation of Nature. Four major coral reefs have also been identified in the country for intensive conservation and management.

India has 25 Marine Protected Areas in the peninsular region and 106 in islands, collectively covering approximately 10,000 square km of the country's geographical areas.

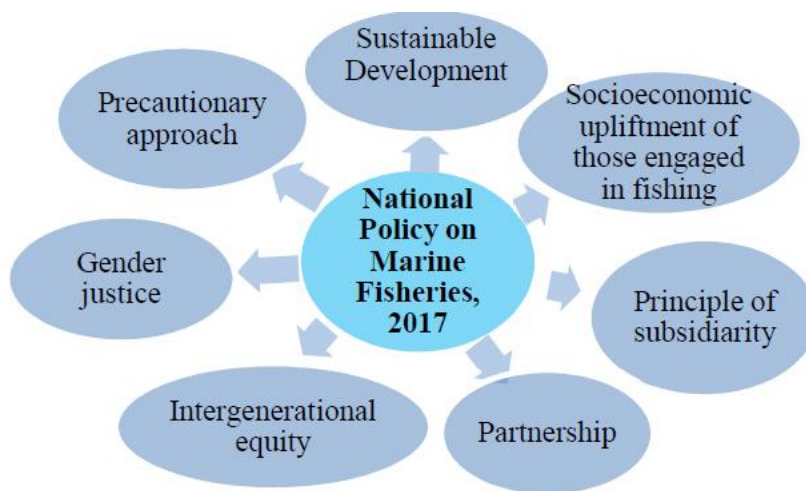
24. Ensuring Sustainability of Fisheries

India has the highest population of fishing communities globally. These communities are spread over 3,600 fishing villages. More than 14.50 million people depend on fisheries for their livelihood. In order to ensure sustainable development of the sector, a number of measures have been taken by the government, with an emphasis on livelihood creation as well as resource conservation. Some of the measures include establishment of a Potential Fishing Zone Advisory programme, modernization and upgradation of fishing centres as well as banning of mechanized fishing in certain areas.

India's Prime Minister has emphasized the need for a "Blue Revolution". In alignment with his vision, a central plan, the Integrated Development and Management of Fisheries, has been formulated. A detailed Integrated National Fisheries Action Plan, 2016 has also been formulated. The plan envisages connecting 15 million beneficiaries for livelihood opportunities through various interventions. Further, the government has emphasized maintenance of the ecological integrity of the marine environment, in order to ensure that there are no adverse effects on endangered marine species.

25. Protection of Coastal Ecosystems

Various national and sub-national legislations are in place for the management and protection of the coastal and marine environment. India has also ratified numerous international conventions related to the use of oceans and their resources, including the United Nations Convention on the Law of the Sea. An online mechanism for predicting the movement of oil spills, the Online Oil Spill Advisory System, was launched in 2015. In addition, the revised National Oil Spill Disaster Contingency Plan, 2015 reflects the important national regulations as well as the current international norms.



Source: Voluntary National Review Report on the Implementation of Sustainable Development Goals by NitiAyog, Govt of India for United Nations High Level Political Forum 2017

Further, levels of marine pollution are being monitored by the government at various locations along the country's coastline through the Coastal Ocean Monitoring and Prediction System. India is also setting up a Marine Observation System along the Coast to gain a better understanding of coastal processes and monitor water quality.

26. Holistic Development of Islands and Coastal Areas

In 2016, the Prime Minister of India launched a flagship programme, Sagarmala, for promoting port connectivity, development and industrialization, in a phased manner during 2015 to 2025. Holistic and sustainable development of coastal communities, especially the population engaged in fishing, is one of the key pillars of the programme. Coastal tourism is also being promoted under the programme for enabling access to better livelihood opportunities.

27. Indicator of SDG India Index 2.0 for SDG Goal 14

S. No.	Target	Indicator	Year	Source
1	14.1	Percentage change in use of nitrogen fertilizers in the coastal states	2015-16	MoSPI
2	14.1	Percentage Ph level of rivers	2015	MoSPI
3	14.1	Percentage of Dissolved oxygen in rivers	2015	MoSPI
4	14.1	Percentage of BOD in river	2015	MoSPI
5	14.1	Coastal Water Quality Index	2015-16	MoSPI
6	14.2	Percentage change in area under mangroves	2017	MoEF&CC

Source: Localising SDGs Early Lessons from India 2019 by NitiAyog, Govt of India

28. Issues/Challenges in Implementation of SDG 14 in India

- ✓ Review of the overall governance system that affect SDG 14 implementation. Implementation of the SDGs would require building up of capacity at Union level, at State level with the Stakeholders.
- ✓ Centralized vessel identification and monitoring system.
- ✓ Public availability of information of ecologically sensitive zones (inclusive but not limited to MPAs).
- ✓ Address poaching, by-catch, accidents of mammals, top predators and turtles.
- ✓ Species specific marine fishing ban based on life-cycle.
- ✓ Ecosystem-based fishery management (quota, HABs, hypoxia, jellyfish).
- ✓ Eco-tourism and Citizen science for monitoring, awareness and alternate livelihood.
- ✓ The fishing sector needs to be given more importance in the current administrative set up in Government of India.
- ✓ Improved coordination between Sectors/Ministries/Departments using marine/coastal resources and space.
- ✓ Strengthen regulatory framework—both laws and implementation mechanism; overlap of jurisdiction to be sorted out; inter-state issues.

- ✓ Environmental clearances and post clearance follow up are often weak and need to be more robust. Marine Terms of Reference are often inadequately framed. The clearance bodies and their processes are limited and they need to be further strengthened. Follow up in most cases is almost non-existent.
- ✓ Top-down fisheries management to be replaced by joint management of fisheries with fishermen issues.
- ✓ Improve information available for resource management—with disaggregated information. Valuation of coastal and marine resources essential for go-no go decisions on projects impacting marine and coastal environment.
- ✓ The issue of marine spatial planning is also a key challenge and there is a need for better and improved mapping of our coastal and marine area.
- ✓ The impact of marine debris and anthropogenic underwater noise on marine and coastal biodiversity are of great importance. There is a need to mitigate potential adverse impacts of marine debris and we need to mainstream such issues.

29. Recommendations for Better Implementation of SDG 14 in India

- ✓ The current administrative set up in the Government of India needs to seriously reconsider and give more focus and importance to fisheries
- ✓ Coordination should be improved between Sectors/Ministries/Departments using marine/coastal resources and space.
- ✓ Strengthening regulatory framework—both laws and implementation mechanism; overlap of jurisdiction to be sorted out; inter-state issues also need to be sorted out.
- ✓ Environmental clearances and post clearance follow up should make stronger.
- ✓ Top-down fisheries management to be replaced by joint management of fisheries with fishermen issues.
- ✓ Stringent implementation of the existing regulations.
- ✓ Centralized vessel identification and monitoring system to be developed.

- ✓ Information of ecologically sensitive zones (incl. but not limited to MPAs) should make available for public.
- ✓ Species specific marine fishing ban based on life-cycle to be developed.
- ✓ Ecosystem-based fishery management (quota, HABs, hypoxia, jellyfish) should come into practice.
- ✓ Eco-tourism and Citizen Science should be use for monitoring, awareness and alternate livelihoods.
- ✓ Policy-makers and managers are required to responsibly evaluate the tradeoffs between economics, social values and environmental sustainability.
- ✓ Desiltation of river confluences (under sagarmala) to be done
- ✓ Data should be made on how to set field strength across states.
- ✓ Subsidy regime for fishermen needs to be rationalized.
- ✓ National planning for conservation of aqua-ecosystems should be done
- ✓ Marine debris and anthropogenic underwater noise – mitigation strategy needs to be developed.
- ✓ Finalization of marine fish policy at the earliest for deep sea fish. Also it is advisable to make foreign collaboration of development of deep sea fishing for capacity building. Ministry of Agriculture to develop deep sea fishing with infrastructure etc including harbors.
- ✓ Public Private Partnership mode should be developed for fisheries involving Foreign/Indian investors in islands.
- ✓ Development of mariculture/cageculture involving Indian/foreign investors – sustainable by conserving fragile ecosystems of islands.
- ✓ Young generation not accepting fishing in capture/culture, looks for govt. jobs/hard cash immediate profit jobs like conducted tours for visiting tourists/sports fishing etc.
- ✓ A specific plan by Ministry of Agriculture to develop for fisheries in A&N islands with NITI Aayog

- ✓ SDG 14.4 & 14.6 – Action Plan on Effective enforcement and implementation of the MFR Act and its rules by all the respective coastal states.
- Registration of all the fishing vessels which include trawlers, purse-seiner, catamaran, country craft and a canoe under MS Act.
 - Monitoring the movement of the fishing vessel by visiting vessel tracking system/ATS in the control room of respective state.
 - Setting up a separate wing for enforcement of MFR Act and regular patrolling in terrestrial water in order to curb the illegal fishing activities in sea.
 - Impose ban on LED light fishing.
 - Prohibition of night fishing from 7 pm to 5 am in the terrestrial water of respective state.
 - Fishing vessel having more than 20 meters OAL shall not be allowed to fish within the terrestrial water and state and these vessels allowed to do fishing exclusively in EEZ.
 - No new permission shall be allowed to construct new vessels (i.e. trawler and purse-seiner) and only replacements of old/non seaworthy fishing vessels are allowed.
 - Prohibition of catching of juveniles of fishes.
 - Purchase of new petrol vessels with latest technology for patrolling the sea for reporting illegal fishing activity.
 - Ministry of Agriculture shall provide fund for recruitment of official, purchase and patrol vessel so that each state shall prepare their action plan for curbing overfishing, illegal, unreported fishing.
 - Complying to the size of the fishing vessel and the capacity of the engine/motor on fishing vessel.
 - One family will be eligible for registering of only one fishing vessel.

- Subsidy shall be granted to only one vessel of the fisherman irrespective of no. of fishing vessels he/she owns.
 - Fishers shall be provided subsidy only for obtaining the document of income certification from concern authority.
- ✓ Fishery related activities specifically inland sector should be suitably included in SDG targets.
 - ✓ It is important to make synergy with line department while preparing state specific plans to achieve goals.
 - ✓ Goals and targets as indicated in SDG-14, especially 14.4, 14.6, 14.7 and 14.b need to be incorporated in the “National Policy on Marine Fisheries” (national policy as well as state policy) and suitably addressed in the implementation plan(s) under the National Marine Fisheries Policy.
 - ✓ Action in various points of the SDG 14 are pertaining to different Ministries/Departments including DADF/MoA&FW, MoES, MoEFCC and also Coastal States Governments, Ownership of various action points should be decided and informed to the concerned Ministry/Dept/State Govt.
 - ✓ Action points in SDG-14 are overarching and require proper coordination and joint action by different departments/agencies. Therefore, it would be appropriate if a committee/body of those various action/plans to be undertaken on SDG.
 - ✓ Adequate enabling provisions duly supported by way of Acts/Guidelines and funding arrangements to implement targets of SDGs are vital to ensure implementation and achieving SDGs.
 - ✓ A clear “National Vision: on SDG-14 may be evolved from which roles and responsibilities of different agencies with time limits and roadmaps may be indicated to track the progress on implementation of SDG.

30. Conclusion

Sustainable Development Goal No 14 means “Life below Water” which is the most important UN FAO SDG as far as Fisheries and Aquaculture is considered. Goal 14 suggests sustainable development in the world through conservation and sustainable use of oceans, seas and marine resources. The proportion of fish stocks within biologically sustainable levels have declined from 90% (1974) to 67% (2015) globally. FAO has developed many tools like CCRF, Port State Measures Agreement, Global Record, Voluntary Guidelines on Catch Documentation Schemes, Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries, The Nansen Research Vessels, Guidelines on Ecolabelling in Fisheries and Aquaculture etc& all these are making contribution towards achieving Sustainable Development Goal No 14.

Reinforcing India’s commitment to the national development agenda and Sustainable Development Goals, the country’s Parliament has organized several forums to develop policy and action perspectives on elimination of poverty, promoting gender equality and addressing climate change. The NITI Aayog is the key organization in India to provide the overall coordination and leadership for performing Sustainable Development Goals work at country level. Recently launched PMMSY (PradhanMantriMastyaSampadaYojana) is truly committed, not only to protect SDG but also doubling the income of Fishermen’s community.

The institution has carried out a detailed mapping of the 17 Goals and 169 targets to Nodal Central Ministries, Centrally Sponsored Schemes and major government initiatives. Most sub-national governments (State Governments) have carried out a similar mapping of the SDGs and targets to the departments and programmes in their respective states. An Integrated National Fisheries Action Plan, 2016 envisages connecting 15 million beneficiaries for livelihood opportunities through various interventions and further, the government has emphasized maintenance of the ecological integrity of the marine environment, in order to ensure that there are no adverse effects on endangered marine species.