



Report on UN SDG 14: Life Below Water

Introduction: UN Sustainable Development Goal (SDG) 14, "Life Below Water," aims to conserve and sustainably use the world's oceans, seas, and marine resources. It addresses threats like pollution, overfishing, and ocean acidification, and promotes the protection of marine and coastal ecosystems for sustainable development. The goal recognizes the vital role oceans play in regulating climate, producing oxygen, and providing food and livelihoods for millions.

Objectives of the SDG -14:

- 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.
- 14. 2: By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience and taking action for their restoration, in order to achieve healthy and productive oceans.
- 14. 3: Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.
- 14.4: By 2020, 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.
- 14.5: By 2020, conserve at least 10 percent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.
- 14.6: By 2020, prohibit certain forms of fisheries subsidies that 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 Organisation fisheries subsidies negotiation.



- 14.7: 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.
- 14.A : 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 enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing states and least developed countries.
- 14. B: Provide access for small-scale artisanal fishermen to marine resources and markets.
- 14. C: Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want.

University-wide Initiatives -

- Maintains **artificial ponds, lakes, and water bodies** on campus to support aquatic biodiversity.
- Conducts **regular water quality monitoring** of campus ponds and nearby rivers through the Environmental Science department.
- Promotes the **conservation of freshwater flora and fauna**.
- Conducts research on **aquatic plants, freshwater fish species, and water pollution control**.
- Students and faculty study **water chemistry, ecosystem health, and sustainable aquaculture practices**.
- Encourages **innovative solutions for freshwater management**.
- Operates a **Sewage Treatment Plant (STP)** to treat wastewater before reuse, minimizing pollution runoff to local water bodies.
- Implements **strict chemical, biomedical, and dental waste management** to prevent contamination of groundwater and surface water.
- Monitors and mitigates potential sources of aquatic pollution across campus laboratories and hospitals.



- Organizes **workshops, seminars, and campaigns** on freshwater conservation and biodiversity protection.
- **NSS and NCC units** conduct river and pond cleanliness drives in surrounding areas.
- Engages communities and students in **responsible water use practices**.
- Promotes **rainwater harvesting** and responsible water use across faculties.
- Encourages **eco-friendly laboratory practices** to reduce contamination from chemical and biological experiments.
- Implements water-efficient measures in campus infrastructure, hostels, and training facilities.
- **The Context:** The Sustainable Development Goals (SDGs), a set of 17 targets for a better and more sustainable life for everyone by 2030, are the end consequence. The UN describes the goals as a global roadmap for dignity, peace, and wealth for people and the earth, both now and in the future. While each goal is important on its own, they all interact and incorporate social, economic, and environmental sustainability. 193 nations gathered and joined the United Nations the United Nations in September 2015 to establish and commit to a long-term, inclusive strategy to address the biggest issues facing global sustainable development.

The UN describes the goals as a global roadmap for dignity, peace, and wealth for people and the earth, both now and in the future. While each goal is important on its own, they all interact and incorporate social, economic, and environmental sustainability. The Sustainable Development Goals (SDGs) are a global initiative to safeguard the environment, end extreme poverty, and reduce inequality by 2030. Investing in green jobs, refusing to bail out polluting industries, ending fossil fuel subsidies, taking climate risk into account in all financial and policy decisions, putting sustainability at the center of the COVID-19 recovery, working in partnership, and leaving no one behind are just a few of the ways that we must work ambitiously together across industries and sectors, governments, and civil society to reach our shared climate goals.



The UN's fourteenth sustainable goal is Life below Water: Conserve and sustainably use the oceans, seas, and marine resources. "Outcome targets" are the first seven targets of UN SDG 14, and the last three targets aim for "ways of attaining them."

- **The Practice:** We have adopted "Best Practices" at the university level. We are sharing our knowledge on various platforms, not only in India but also at the international level. The adopted "best practices" are as follows:
 - The university has reduced the overflow of nutrients in the water. Besides this, for recycling, we have our own ETP and STP units.
 - As per the report, one million plastic water bottles are bought every minute throughout the globe, and up to 5 trillion single-uses plastic bags are used annually. So, carry your own water bottles and don't use plastic bags, plastic glass, plastic plates, or cutlery inside the campus. These should be strictly followed by all employees. Plastic bags are banned as per government guidelines. Usage and carrying are strictly prohibited in our university campus.
 - These are also sources of plastics and micro-plastics in rivers and, ultimately, in oceans. The plastics are discarded as waste and, finally, into our aquatic bodies, where they are bioaccumulated in the bodies of aquatic organisms and fish, thus returning to our food chain. We, at our university, are trying to minimize the same.
 - We have adopted the practice to reduce and minimize the use of plastic-based materials at the workplace. We are trying to reuse the essential plastic materials, e.g., avoid carrying one-time-use plastic pens, especially those used and thrown. Instead of these, prefer refilling the pen. Wooden and refillable pens and refills are also available on the market.
 - We are following the rule: reduce, recycle, and reuse. Reduce ocean acidification, protect aquatic ecosystems, and reduce pollution in them. And sustainable fisheries are recommended. Even those who are researchers or faculty should strictly follow ethical committee guidelines and clearance and ensure that their research is not harming the fish at the species level.
 - Try to culture indigenous varieties, and those who are using fish as a source of food should ask for our native variety. It will encourage fishermen to culture the variety, and it will be helpful to save fish diversity. A sustainable fishery is one that ensures there



are still enough fish in the ocean, that habitats are respected, and that those whose livelihoods depend on fishing may continue to do so.

- Our faculty, staff, and students are conserving coastal and marine areas when they are visiting or on an outside trip, and they are not assigned to any illegal activity that is banned by guidelines.
- Fishing and aquaculture can help reduce poverty, hunger, and malnutrition while also promoting economic prosperity. It will be helpful for the conservation of diversity and the fulfilment of nutritional requirements. Commercial mining of seabed minerals should be zero if anyone is involved in the same business. So, we are promoting the start-up, and faculties and students are free to apply for it.
- A fraction of the overall research is also devoted to marine/freshwater technology research. We are also promoting for increase ocean health research, knowledge, and technologies. We have applied for several projects, and a few students are working on fish molecular biology and immunology.
- The course, especially in Fisheries Science, Marine Biotechnology, Fish Physiology, Fisheries Management, Aquaculture, and Fish Genetics (for conservation of genetic diversity), should be proposed for better understanding. Marine and freshwater diversity should be studied by Fishery Science students, and it is mandatory to propose a research proposal for the conservation of fish and aquatic diversity to governing agencies.
- Application of a legal, regulatory, policy and institutional framework that recognises and protects access rights for small-scale fishing has advanced in various nations. So, being an academicians we are following guidelines
- The voluntary guidelines are also an accepted tool that encourages better small-scale fisheries governance, including in value chains, post-harvest activities, and trading. We are following national (state, central government) and international laws.
- Talk up! Ask your local and national authorities to take part in projects that respect people and the aquatic environment. Express your support for the Paris Agreement.
- We are remained updated. Keep up with the Global Goals online or on social media, and keep up with your local news. As per advisory, we are sharing progress towards achieving the goals by using social media.



- Along with the aforementioned, reduce your residual carbon emissions! Climate Neutral Now offers climate credits that you may purchase and use to quantify your carbon footprint. By doing this, you hasten the reduction of global emissions.
 - Consume fewer fish according the nutritional requirements.
 - If you can't consume fresh fish items or products before they spoil, freeze them. If you know you won't feel like eating it the next day, you can even do this with food that has been delivered or taken out.
 - Buy products with less packaging. Always ask the question "Do you provide sustainable fish?" when ordering seafood at a restaurant. Inform your favourite companies that you plan to buy seafood that is not harmful to the ocean.
 - Buy only fish that is sustainably caught. These days, there are numerous apps like this one that will inform you of the safe foods to eat.
 - When anyone is going shopping, bring their own bag. Stop using plastic bags and begin using your own reusable totes instead. Spend at least one week learning how to live more sustainably.
 - Talk up! Request that your business and the government take on projects that won't hurt people or the environment. Declare your backing for the Paris Agreement!
 - Since the majority of waste is dumped in our oceans, try to reduce waste.
 - Encourage community activism. Create peer pressure among leaders' networks of knowledge, skill, and practice.
 - Mobilise stakeholder networks across localities, organisations, nations, industries, and regions to work together towards a similar goal.
 - Examine and alter daily choices. Do you have a recycling programme at work? Does your business make purchases from retailers who use unfavourable aquatic or marine environmental practices?
 - Social responsibility at work is important. Be a responsible citizen of your country. Encourage your business to collaborate with civic society and look for approaches to support regional communities in achieving their objectives.
- 🌱 **Evidence of Success:** Swami Vivekanand Subharti University has adopted the above best practices. To make society aware and achieve the targets of UN SDG 14, we have



conducted many activities. All the activities were organized by Swami Vivekanand Subharti University and were free for all. A few of them are as follows:

- ✿ **International workshop:** Keeping SDG14 in mind, we have organized a 3-day international workshop for sustainable development. It was an initiative of university social responsibility. A report is attached to this document.
- ✿ Link to the flyer: <https://news.subharti.org/recent-advances-in-aquaculture-and-fisheries-science/>
- ✿ **Internship, Training, and Consultancy Programmes:** We are providing training and consultancy in the aquaculture and fisheries sectors. The consultancy is free for all fish farmers and local people who are willing to work in the same area. Moreover, we are promoting to achieve targets of UN SDG 14 for sustainable development. We are promoting small-scale fishermen and guiding them to minimize land-based activities.
- ✿ **Visit to various hatcheries and units:** To learn various tools and techniques and promote knowledge sharing and skill development, we are organizing various activities for students so that they can get knowledge about recent advancement and start various activities for their own and societal benefit.
- ✿ **Visit of International Faculties:** Various international faculties (Dr. Binay Chakraborty, Director, Mud Eel, and Mud Crab Centre Bangladesh, Dr. Dilfuza P. Jabbrova, Institute of Genetics and Plant experimental biology Academy of Science of the Republic of Uzbekistan) are also visiting for the guidance of the scholars and faculties.
- ✿ **Training and guidance for fish farmers and for start-ups:** We at SVSU are also providing free training and guidance to fish farmers for sustainable fishing. We are also guiding the people to start their own businesses to promote sustainable fisheries and sustainable goals.
- ✿ **Promoting Reduce, Recycle and Reuse (An Initiative):** At our own level of sustainable development and usage, we are using our artificial ponds to keep our ornamental fish. The experimental models have been released to different ponds to provide them a natural ecosystem and allow them to naturally breed.

So, there is no need to collect further samples from other aquatic bodies. It is very fruitful to avoid unnecessary fishing and helpful in conservation. So, the pond on our



campus can be utilized in three ways: for ornamental purposes, for keeping stock of fish, and for allowing them to grow and breeding in a natural ecosystem.

- ⊕ **Problems encountered and Resources Required:** The main problem is the availability of resources, and we require technology and financial assistance as we at SVSU are doing at our own level. It is high time for awareness and sharing of knowledge and technology that is required in Western U.P.
- ⊕ **Suggestions:** Followings are the suggestion :
 - ⊕ We should adopt the mentioned best practices and minimize the usage of plastic so that land-filled activities can be reduced.
 - ⊕ We should try to reduce marine pollution, particularly from land-based activities, including marine debris and nutrient pollution.
 - ⊕ Sustainably managing and protecting marine and coastal ecosystems is required to avoid significant adverse impacts, including by strengthening their resilience and taking action for their restoration in order to achieve healthy and productive oceans.
 - ⊕ Minimization and addressing the impacts of ocean acidification, including through enhanced scientific cooperation at all levels, should be done. We can organize some scientific activities for the same.
 - ⊕ People are not aware of sustainable fishing, so in order to achieve this goal, we should effectively regulate harvesting, end 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 the maximum sustainable yield as determined by their biological characteristics.
 - ⊕ Overfishing should be prohibited by certain forms of fisheries subsidies that 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 Organisation fisheries subsidies negotiation. The guideline should be implemented at the individual level.
 - ⊕ Economic benefit from sustainable use of marine resources can be achieved through the management of fisheries, aquaculture, and tourism.



- ➊ To increase scientific knowledge, research, and technology for ocean health, we should conduct workshops, seminars, and conferences so that it can be done at the international level.
- ➋ To support small-scale fishermen, we should conduct training and consultancy services and guide them for government schemes.
- ➌ For the implementation and enforcement of international sea law, an awareness drive should be conducted so that it can be followed not only at the national level but also at the ground level.
- ➍ We can provide access for small-scale artisanal fishermen to marine resources and markets.
- ➎ To enhance the conservation and sustainable use of oceans and their resources by implementing international law, the countries can follow the strategic plan and implement guidelines for the same at the district level, state level, and country level.

The objectives of Swami Vivekanand Subharti University, in alignment with the United Nations Sustainable Development Goals (UNSDGs), along with the University’s contributions towards achieving these objectives, are outlined below:

UNSDGs and University’s Objective	University’s Contribution Towards Achieving its Objectives
<p>SDG 14: Life Below Water</p> <p>University’s Objective: To engage in research and awareness campaigns that address the impact of plastic pollution and waste on water bodies, promoting responsible waste disposal to protect aquatic ecosystems.</p>	<p>Faculty of Medicine -</p> <ul style="list-style-type: none"> • Promotes eco-conscious biomedical waste management to prevent water contamination. <p>Faculty of Dental Sciences -</p> <ul style="list-style-type: none"> • Implements environmentally safe disposal of dental chemicals and materials to reduce aquatic pollution. <p>Faculty of Nursing -</p> <ul style="list-style-type: none"> • Promote eco-conscious biomedical waste management in nursing to safeguard water sources and public health <p>Faculty of Engineering & Technology -</p> <ul style="list-style-type: none"> • Develops water treatment, filtration, and pollution monitoring systems. • Students design innovative devices for water quality assessment and freshwater conservation. <p>Faculty of Pharmacy -</p> <ul style="list-style-type: none"> • Studies pharmaceutical residues in water bodies and promotes safe disposal of medicines.



Faculty of Science -

- Leads research in **freshwater ecology, water quality analysis, and aquatic biodiversity conservation.**
- Conducts student projects on **microbial pollution, aquatic plants, and freshwater fish studies.**

College of Hotel Management -

- Implements **water-efficient practices** in kitchens, hostels, and hospitality training labs.
- Promotes **reuse of water and eco-friendly cleaning methods**

Faculty of Arts and Social Sciences -

- Trains communities in **water conservation techniques and responsible household water use.**
- Conducts **community awareness campaigns** on river, pond, and groundwater protection.
- Researches **policy frameworks for freshwater conservation and sustainable water management.**
- Produces **campaigns, articles, and documentaries** on water conservation and freshwater biodiversity.
- Promotes **mindfulness, respect for nature, and ethical use of water resources.**

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