



COMPENDIUM ON SUSTAINABLE DEVELOPMENT GOALS 2024

SDG 14 – LIFE BELOW WATER



2023-24

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Introduction:

The SDGs aim to sustainably manage and protect marine and coastal ecosystems from pollution, as well as address the impacts of ocean acidification. Enhancing conservation and the sustainable use of ocean-based resources through international law will also help mitigate some of the challenges facing our oceans. 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. By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information. By 2020, prohibit 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.

Life below water is defined as Conserve and sustainably uses the oceans, seas and marine resources for sustainable development. A large portion of our planet is covered by ocean and oceans play key role in supporting life on earth. It encompasses over 70% of the Earth's surface and holds the top position as the most bio-diverse ecosystem in the biosphere. It plays important role in balancing the climate, provides food and job.

Here are the 10 easy things that we execute to save our oceans which can be done at home, across town and on the ocean.

At home

- Use less water so that excess wastewater will not run on to the ocean
- Reduce non-toxic chemicals and dispose them in a proper way
- Recycle the wet waste as a fertilizer and cut down what we throw across town
- Avoid using plastic covers, carry go-green bags or reusable bags and shop prudently and try to pick sustainable seafood.
- Reduce Vehicle Pollution by taking walk to near places, using bicycle, shifting for eco-friendly vehicles like electric car and scooters, solar powered vehicles, carpool or taking local transportation.

- Consume Less Energy by choosing energy efficient light bulbs and don't overset your thermostat, switch off the lights and fans when not in use.

On the ocean

- Fish Responsibly: follow "catch and release" practices and keep more fish alive and avoid overfishing, illegal, unreported, and unregulated fishing, and destructive fishing practices and refrain from introducing new subsidies.
- Practice Safe Boating Anchor in sandy areas far from coral and sea grasses. Adhere to "no wake" zones.
- Respect Habitat: Healthy habitat and survival go hand in hand. Treat with care. Do not disturb the Eco-system.
- Last but not the least volunteer for clean-ups at the beach and in your community. You can get involved in protecting your watershed too!

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.

Status in India

- **People around** 13.36% of the population live in coastal district
- Ranked 12th among top 20 countries responsible for marine pollution
- Generates 25,000 of plastics every day and around 40% remains uncollected
- Sea level rises by 1.33 mm/year on costs
- Second largest producer of fish

Sustainable Development Goal 14 (SDG 14) is titled "Life below water" and is one of the 17 Sustainable Development Goals established by the United Nations in 2015. Its primary objective is to "Conserve and sustainably use the oceans, seas, and marine resources for sustainable development." This goal comprises ten targets to be achieved by 2030, each measured by a specific indicator.

The first seven targets focus on outcomes, aiming to reduce marine pollution, protect and restore ecosystems, combat ocean acidification, promote sustainable fishing practices, conserve coastal and marine areas, eliminate subsidies that contribute to overfishing, and maximize economic benefits from the sustainable use of marine resources. The remaining three targets pertain to means of implementation, seeking to enhance scientific knowledge, research, and technology for ocean health, support small-scale fishers, and implement and enforce international sea laws. One of the indicators (14.1.1b) under Goal 14 specifically addresses the reduction of impacts from marine plastic pollution.

Despite efforts, the 2020 report on progress towards the Sustainable Development Goals highlights that the current measures to safeguard vital marine environments, protect small-scale fishers, and invest in ocean science are insufficient to meet the urgent need for the preservation of this vast and delicate resource.

OUR INITIATIVES FOR LIFE BELOW WATER (SDG 14)

Water conservation in college is a crucial and responsible initiative that every member of the college community should actively participate in. As a precious natural resource, water plays a vital role in sustaining life and supporting various activities on campus. By implementing effective water conservation measures, we can contribute to the preservation of this invaluable resource and create a more sustainable environment.

One of the key steps towards water conservation in college is raising awareness among students, faculty, and staff about the importance of using water wisely. Simple practices like turning off taps tightly, fixing leaks promptly, and reporting any water wastage can significantly reduce water consumption.

As a pharmacy college, few of the major indicators that is implemented to contribute towards SDG 14 are:

- Sustainable Campus Practices to end pollution in water
- Integrate marine conservation and sustainability topics into the curriculum

Organize awareness campaigns and events to promote on water conservation, plastic pollution, and the importance of water bodies for human well-being

POLICIES

JSS Academy of Higher Education and Research has well-crafted policies on smart campus, plastics, and campus waste disposal. Smart campus theme is adopted and realigned with sustainable development goals of UN.JSS AHER is committed to protecting the environment by minimizing the use of plastic in the campus. JSS AHER follows Central Pollution Control Board and Karnataka State Pollution Control Board guideline for campus waste disposal.

WATER UTILITY IN CAMPUS

- Main uses of water in the campus: Drinking, Laboratory, Canteen, Garden, Cleaning, Toilets, Bathrooms, Hostels, Guest house, Washing, Office uses.
- Sources of water: Municipality (30,000 L/day) and purchase from private agencies (60,000 L/day)
- Water storage: Sump (2 numbers of 10,000 L each) and Overhead tank – OHT (1 number of 1,00,000 L)
- Quantity of water pumped every day, from sump to overhead tank: ~80,000 L
- No. of water taps on campus: Common areas – 19, Guest House – 132, Boy’s hostel –148, Girl’s hostel –174, Auditorium – 7, College block – 12
- Number of water taps and usage in canteen: Canteen – 2Nos, Amount of water used – 300 L/day
- No. of water taps in laboratories: 127 and water used is ~ 2000 L/day
- Number of RO units: 04
- Number of toilets on campus: Guest house – 21, boy’s hostel – 70, girl’s hostel – 74, College – 24, and Urinals – 12 Nos
- Quantity of water used in hostel: Boys’ Hostel ~ 42,000 L/day and Girls Hostel ~ 50,000 L/day
- Quantity of water used for cleaning the vehicles of the Institute: 100 L/week

Water storage tanks are cleaned atleast once in six months and as and when required in between. Water distribution system is regularly monitored and maintained by in-house maintenance staff. No persistent water leakage has been reported. The staffs are aware that leaking taps should be immediately replaced to avoid wastage of water. Minor leakages are sorted out immediately by the in-house plumber. College is equipped with water saving fixtures in taps wherever required and urinals tap automation.

Drinking water:

Reverse Osmosis purifying units are available to cater to the drinking water needs of students, staff and visitors on campus.. Sign boards are placed in prominent locations creating awareness on water conservation and its importance. Drip/sprinkler irrigation is adopted to water the garden/landscape. The college regularly conducts activities to spread awareness and educate the staff and students on water conservation activities. Drinking water is tested for compliance with the drinking water standards and found to be safe.

It is suggested to regularly test the RO water quality to ensure its potability. Also, reject water from RO unit could be directed to the garden area to be used to water plants and lawn

Rainwater Harvesting Implementation

Campus has rooftop rainwater collecting facility which collects rain water and stored in two tanks of 25,000 L capacity each. Additionally, the college harvests rainwater, which is be utilized for non-potable purposes such as irrigation and flushing toilets.



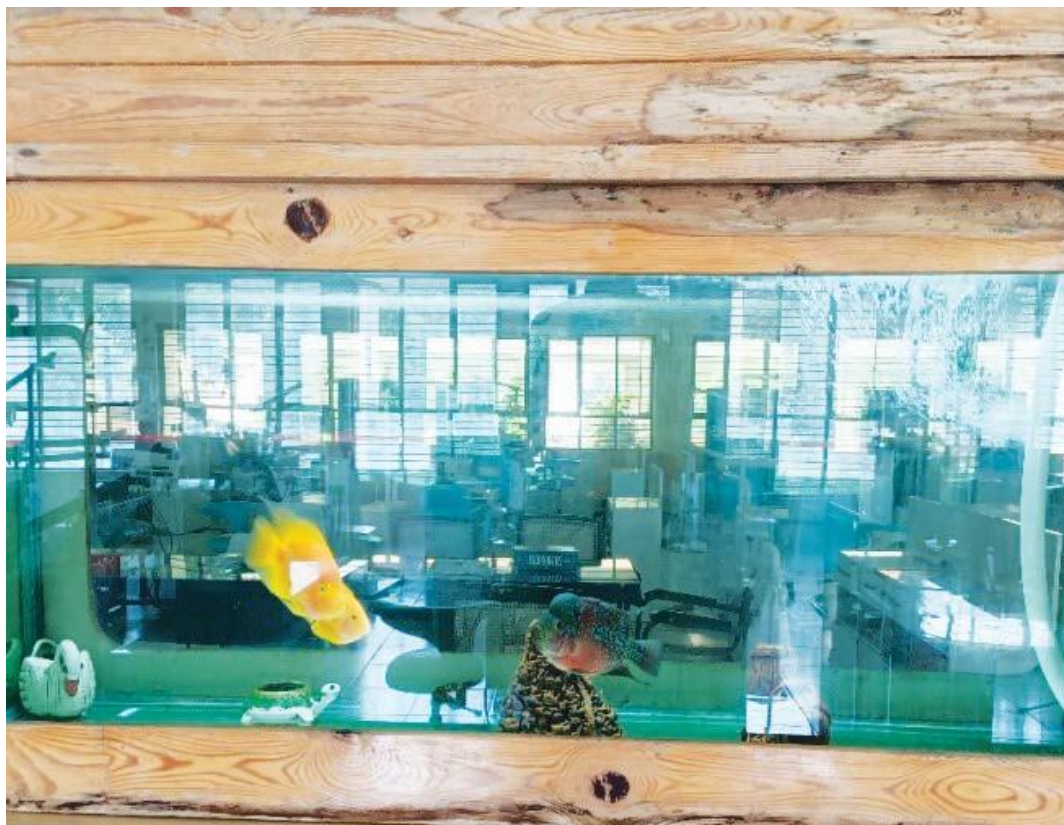
Being so far in Land and on hill station, Life below water is restricted. However, the college contributes to the conservation of water at every possible way. The regular water testing is performed in Department of

Pharmaceutical Biotechnology of our college and the report is generated and based on that the necessary action is taken if the samples are found contaminated.

RO water facility in the academic and residential areas along with in the premises of hostels is available.

Installing water-efficient fixtures, such as low-flow faucets and toilets, can also contribute to water savings on a daily basis. Low water release taps are installed in the Campus Hostel facilities.

Marine biodiversity



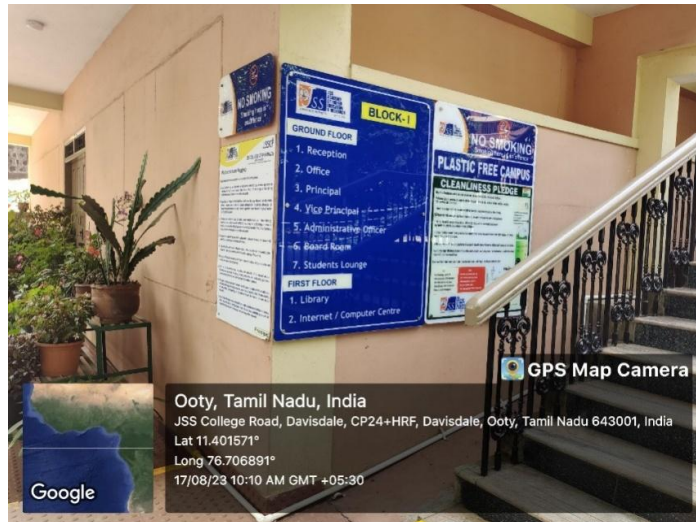


Plastic Waste Management

Managing the waste in a smarter ways is the most important aspect in any organization. For this the existing management for the waste we have Bio-waste management, initiative of plastic free campus with no plastic bottles, Rain Water harvesting management for the reduction of water waste to save more water. Paper shredder in office to cut short the storage of waste papers. Mechanical Chimneys, Fume hoods for chemical reactions and Bio-safety cabinets (Class II type A/B3).

Furthermore, in the future educational campaigns and workshops can be organized to educate the college community about water conservation techniques and the significance of water stewardship. Involving students in practical projects, such as maintaining a water-efficient garden or creating awareness posters, can foster a sense of responsibility towards water conservation.

By coming together as a united college community, we can take small yet impactful steps towards water conservation. Implementing these measures not only helps us become more environmentally conscious but also sets an example for others to follow. Ultimately, our collective efforts in water conservation will contribute to a sustainable future and a greener campus for generations to come.



Plastic free campus of JSS College of Pharmacy, Ooty

Publication

1. Sunita C. Mesta and R. Onkarappa. Anticancer Property Of L-Glutaminase Producing Actinomycete *Streptomyces albogriseolus* Isolated From Estuary Of Uttara Kannada District Against Hela And HepG2 Cell Lines. Journal of Advanced Zoology. 2024; 45(3):15-23. <https://doi.org/10.53555/jaz.v45i3.4135>