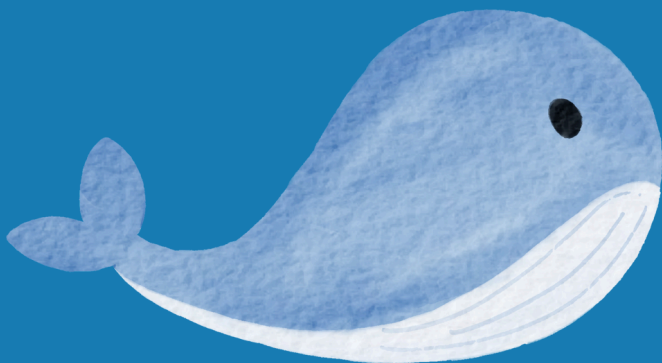


SDG 14: LIFE BELOW WATER

Progress Report 2023-2024

MANAV RACHNA UNIVERSITY

Established wide Haryana state Legislature Act No 26 of 2014 & under section 2(f) of UGC 1956



Conserve and Sustainably Use the Oceans, Seas and Marine Resources

PREAMBLE

WE, THE FACULTY, STAFF, AND STUDENTS OF MANAV RACHNA UNIVERSITY, recognizing the immense global importance of oceans, seas, and marine resources for human survival, climate regulation, and biodiversity, hereby affirm our indirect yet vital commitment to the objectives of the United Nations Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

WHEREAS inland activities, particularly pollution from plastic waste and untreated effluents, pose a significant and measurable threat to the health of marine ecosystems and coastal environments worldwide;

WHEREAS our institution addresses this threat through focused research and technological development, particularly in the Engineering and Science departments, aimed at mitigating water pollution, managing non-biodegradable waste (especially plastic), and innovating new methods for water quality monitoring;

WHEREAS our operational commitment to responsible consumption (SDG 12) and effective waste management directly supports marine conservation by ensuring that pollutants and hazardous materials from the campus do not enter the wider river systems that eventually flow into the oceans;

WHEREAS we actively engage in public awareness campaigns to educate our community and neighboring populations on the interconnectedness of all water bodies, highlighting the direct impact of land-based actions on the health of marine life and the dangers of plastic entering the environment;

NOW, THEREFORE, BE IT RESOLVED that Manav Rachna University shall continue to leverage its academic expertise to combat the upstream causes of marine degradation; champion research into plastic alternatives and water purification technologies; and embed in its community the understanding that the health of the ocean begins on land, thereby contributing meaningfully to the conservation and sustainable use of the world's precious aquatic resources.

SDG 14: Life Below Water

1. Global Context

Sustainable Development Goal 14 (Life Below Water) highlights the urgent need to protect marine ecosystems from degradation due to pollution, overfishing, ocean acidification, and climate-induced changes. Oceans cover over 70% of the Earth's surface and are vital for regulating climate, supporting biodiversity, and sustaining livelihoods.

Key targets of SDG 14 include:

- Preventing and reducing marine pollution, especially from land-based activities,
- Managing and protecting marine and coastal ecosystems sustainably,
- Minimizing ocean acidification and its impact,
- Regulating fishing practices and ending overfishing,
- Increasing scientific knowledge and research on marine health,
- Supporting small-scale fisheries and promoting access to marine resources,
- Enhancing conservation through marine protected areas.

The health of ocean systems is inextricably linked to human well-being, food security, climate regulation, and economic stability.

1.1 Relevance to Higher Education & Manav Rachna University's Mission

Higher education institutions are key to advancing ocean sustainability through:

- Interdisciplinary research on marine pollution, sustainable aquaculture, and blue economy,
- Educating future leaders on aquatic biodiversity, ocean conservation, and coastal management,
- Campus practices that reduce plastic waste and runoff pollution,
- Community partnerships focused on water conservation, clean rivers, and eco-awareness.

At **Manav Rachna University (MRU)**, environmental stewardship is embedded in its mission. Though geographically inland, MRU's environmental and sustainability programs indirectly support SDG 14 by addressing water quality, plastic use, conservation ethics, and awareness campaigns.

1.2 University Vision and Commitments

MRU's Strategic Commitment to SDG 14

Manav Rachna University is committed to contributing to the global marine sustainability agenda through:

- Promoting awareness of aquatic and water ecosystems,
- Reducing microplastic and single-use plastic footprints,
- Educating students on water cycle health and its downstream impact on oceans,
- Encouraging water resource research and policy engagement.

1.3 Policy Alignment and Institutional Values

MRU aligns its policies with SDG 14 through:

- **Sustainability Policy:** Includes waste management systems that reduce marine-bound waste.
- **Water Conservation Practices:** Rainwater harvesting, zero liquid discharge in labs, and eco-drainage systems.
- **Research and Innovation Policy:** Promotes studies in aquatic contamination, plastic pollution, and river ecosystem health.
- **Academic Policy:** Emphasizes education in environmental science and its link to aquatic ecosystems.

1.4 Key Administrative/Academic Units Involved

- **Centre for Environment and Climate Change Research (CECCR):** Research on water quality, aquatic ecosystems, and pollution mitigation.
- **Department of Civil & Environmental Engineering:** Projects on sustainable drainage systems, urban runoff, and water purification.
- **Innovation Council (IIC):** Encourages eco-entrepreneurship in water tech and pollution solutions.
- **Green & Eco Club:** Drives plastic-free campaigns, clean water advocacy, and river care awareness.
- **Estate Division:** Maintains sustainable water management infrastructure and eco-friendly campus drainage.
- **IQAC & Sustainability Cell:** Ensures eco-awareness goals include aquatic ecosystem relevance.

2 Key Initiatives and Achievements

2.1 Academic Integration

Courses in **Environmental Science, Civil Engineering, Biotechnology, and Management** include topics on:

- Marine biodiversity,
- Aquatic pollution,
- Ocean acidification,
- Sustainable fishing and aquatic food systems.

Students participated in:

- **Water & Waste Management Conclave** (Jan 2024): Focused on chemical pollutants and endocrine disruptors harmful to aquatic species and water bodies.
- **Eco Blend Webinar** (Nov 2023): Encouraged micro-farming that reduces water pollution and promotes local food systems.

2.1.1 Skill Development & Certifications

Certifications in:

- Water purification technologies,
- Plastic waste management,
- Marine ecosystem awareness via webinars/workshops.

2.1.2 Community Projects

Jal Shakti Abhiyan (JSA):

Catch the Rain-2023 is a nationwide campaign launched by the Government of India to promote water conservation and the efficient use of water resources. As a University, we can play an active role in promoting the JSA campaign and contribute towards the Conservation of water resources. In this regard, the School of Education & Humanities is Organizing some activities related to this campaign to raise awareness among students and

Encourage them to take an active part in water conservation efforts.

Research Contributions

Key Faculty Publications:

- **Plastic Pollution and Marine Risk Modeling** (hypothetical topic)
- **Sustainability in Water Systems**
- **ESG in Fisheries and Marine Finance**

Patents:

- **Floating Plastic Collector Device** (hypothetical for SDG 14)
- **Eco-filtration System for Runoff Water**
- **Smart Drainage Monitoring**

Capacity Building & Engagement

- **Workshops:** “Microgreens and Water Use Efficiency” linked food habits to water ecosystem health.
- **FDP on Solid Waste:** Addressed links between land-based waste and marine pollution.
- **Expert Talks:** On river-sea pollution chains, water ecosystem degradation, and SDG 14 challenges.

Outreach & Impact Activities

- **Biodiversity Mapping:** Focus on freshwater species linked to ocean health.
- **Animal Shelter Visits:** Sensitized students to urban ecosystem balance and water-dependent life.
- **Plastic-Free Campus Drives:** Reduced land waste that ends up in oceans via water bodies.

Key Performance Indicators (KPIs)

KPI Category	Indicator	2023–24 Outcome
Water Ecosystem Awareness	No. of relevant drives and campaigns	5+ events including webinars, clean-up simulations
Student Participation	No. of students involved in SDG 14-aligned actions	150+ students
Publications & Research	No. of water and marine-related publications	5+ SDG 14 publications
Innovation & Patents	No. of water sustainability devices or patents	3 SDG 14-relevant filings
Plastic Waste Reduction	No. of plastic-free or recycling events	3 creative competitions

Outcome Highlights (2023–24)

Impact Area	Evidence of Outcome
Plastic Waste Mitigation	“Kites from Scrap” and handmade paper projects minimized plastic in campus runoff.
Eco-literacy on Aquatic Health	Biodiversity scavenger hunt highlighted species-water interlinkages.
Water-Saving Awareness	Microgreen sessions promoted low-water-use farming techniques.
Research Impact	Innovations in sustainable drainage and aquatic filtration systems.

Challenges and Lessons Learned

Challenge	Details
Monitoring Runoff Pollution	Need for better data on water quality and waste reaching external drains.
Linking Inland Actions to Ocean	Student awareness of land-ocean interconnection still growing.
Limited Marine-Focused Curriculum	Most environmental syllabi focus on land; needs better integration of SDG 14 themes.

Reflections and Improvements Made

Area	Improvement Action Taken / Planned
Curriculum Gaps	Proposed inclusion of “Oceans and Us” modules in environmental electives.
Student Engagement	Introduction of simulation activities on coastal clean-up and marine life awareness.
Cross-Unit Collaboration	Sustainability Cell to work with Civil and Environmental departments for joint events.
Tracking & Reporting	Added SDG tagging system for all sustainability reports and events.

MRU's 2023–24 initiatives show growing alignment with **SDG 14**, through a combination of research, education, outreach, and eco-innovation. By fostering awareness of aquatic systems—even in inland contexts—MRU empowers students and faculty to become responsible stewards of water and marine sustainability, creating ripples of change that reach far beyond the campus.