







# Sustainability Report 2022-23

( Goal - 14)







SDG14

Courses Offered -

Biology of Invertebrates

Fish Diversity and Physiology

Biodiversity and wildlife conservation

Wildlife management and Legislation

Fisheries and Aquaculture

Ecology and Evolution

**Environmental Sciences** 

# LIFE BELOW WATER

Conserve and sustainably use the World's oceans, seas, and marine resources

## Introduction to SDG - 14

Galgotias University actively contributes to SDG 14: Life Below Water through education, research, and sustainable practices.

The School of Biological and Life Sciences offers BSc (H) Zoology, BSc (Zoology, Botany, and Chemistry), and MSc Zoology programs, integrating core subjects on aquatic ecosystems, marine biodiversity, and ecosystem management.

Additionally, all undergraduate students study Ecology and Environment, which explores biological diversity and advances in ecological conservation.

The university also provides PhD research programs in Zoology and Biological Sciences, focusing on aquatic animal studies, marine conservation, and water resource management.

Beyond academics, Galgotias promotes sustainability on campus by saving water and electricity, using solar-based infrastructure, and ensuring eco-friendly practices.

These initiatives contribute to a healthier ecosystem, reinforcing the university's commitment to environmental stewardship. Through teaching, research, and sustainability efforts, Galgotias University plays a crucial role in preserving aquatic life and promoting responsible resource management.





#### Programs Offered -

Doctor of Philosophy (Ph.D.) in Environmental Sciences M.Sc. in Sustainability

Water & waste water Treatment Systems
Environment and Energy for smart city
Agriculture and medical entomology
Soil and water conservation Engineering
Red fed agriculture & watershed management
Soil, Plant, Water and seed testing

#### MSc. Courses -

Environmental Microbiology Ecology and Environment Biodiversity and Conservation

# National Science Day Celebration

Galgotias University celebrated National Science Day on February 28, 2022, commemorating the discovery of the Raman Effect. The event focused on the theme "Integrated Approach in Science and Technology for a Sustainable Future", highlighting the role of scientific advancements in shaping a better world.

Organized by the Innovation Shell of Galgotias University, the celebration featured a grand exhibition under the program "Open House of Projects", where students showcased innovative scientific models and research projects. The event provided a platform for young minds to demonstrate their creativity and problem-solving skills through practical applications of science and technology.

The exhibition attracted faculty, students, and researchers, fostering an environment of innovation, collaboration, and scientific curiosity. Through such initiatives, Galgotias University continues to promote scientific learning and sustainability, inspiring students to contribute to technological advancements for a better future.

#### Student Visit to Kirori Mal College, University of Delhi : Outreach Programme

Galgotias University organized a student outreach program at Kirori Mal College, Department of Zoology, University of Delhi, focusing on sustainable fisheries and hydroponics. This initiative aimed to bridge the gap between theory and practice, fostering environmental awareness and sustainable resource management.

Through interactive sessions, workshops, and hands-on experiences, students explored the importance of sustainable fisheries in maintaining ecological balance and preventing overexploitation of marine life.

Discussions highlighted the role of conservation techniques, aquaculture advancements, and responsible fishing practices in ensuring long-term marine biodiversity.

The program also introduced students to hydroponics, an innovative, water-efficient farming method that reduces dependency on soil and conserves natural resources. By gaining practical exposure to these techniques, students developed a deeper understanding of sustainable agriculture and aquatic resource management.

This outreach initiative empowered students with the knowledge and skills to

contribute to a more sustainable and resilient future, aligning with SDG 14: Life Below Water.

Fish Specimen and pond ecosystem study
Kirori Mal College, Delhi University

## Sustainable Fisheries : Community Outreach

Galgotias University actively promotes sustainable fisheries, aquaculture, and water management through educational programs and outreach initiatives for local

and national communities.

The university organizes free activities, workshops, and awareness sessions focused on responsible fishing, aquatic conservation, and eco-friendly tourism practices.

Students and community members participate in these initiatives, learning about sustainable water resource management, pollution control,

and biodiversity conservation.

These programs help raise awareness about the importance of protecting aquatic ecosystems while equipping participants with the knowledge to implement sustainable fishing and aquaculture practices, aligning with SDG 14: Life Below Water for a healthier marine environment.



Protecting our oceans is not just an act of conservation; it's a commitment to preserving marine biodiversity, ensuring sustainable aquatic resources, and securing a healthier planet for future generations.

# Overfishing: Community Outreach

community outreach programs and environmental education. Overfishing continues to threaten global fish stocks, with more than a third of fish populations being overfished, leading to ecological imbalance.

GU actively participates in raising awareness about overfishing, illegal fishing, and destructive fishing practices through outreach activities aimed at local and national communities.

These initiatives include workshops, seminars, and collaborations with farmers, local fishermen, and schools to promote sustainable fishing practices and environmental protection. By educating farmers and fishermen on water management and sustainable fisheries, GU fosters a deeper understanding of the importance of conserving aquatic resources.

Additionally, the university maintains a green campus and works diligently to minimize pollution in water bodies, supporting SDG 14's vision of conserving and sustainably using marine resources for future generations. Through these efforts, GU plays a crucial role in ensuring the long-term health of our oceans and marine life.

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# Next Generation Science and Technology

The 3rd National Symposium on "Next Generation Science and Technology," organized by Galgotias University, focused on the theme "Integrated approach in science and technology for a sustainable future," aligning with SDG 14: Life Below Water.

The event explored sustainable technological solutions, including electric vehicles, to protect aquatic ecosystems and reduce marine pollution. Students and faculty actively participated in model exhibitions, a quiz competition, oral talks, and poster presentations.

The symposium encouraged innovation and highlighted the role of science and technology in achieving sustainability, emphasizing the need for eco-friendly practices to safeguard marine resources and promote environmental health.

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#### Tree Plantation Drive for Greener Tomorrow

Students and faculty members of B.Tech Civil Engineering at Galgotias University have designed and fabricated a "Pond Cleaning Machine" to address the issue of polluted water bodies.

The machine aims to clean ponds and canals contaminated with sewage, plastics, dead animals, and other debris. By automating the cleaning process with a motor and chain drive system, the project reduces manual labor, time, and the risk of disease transmission to humans, animals, and wildlife. The machine can access deeper areas of water bodies that are otherwise difficult to reach, offering a safer, more efficient solution for environmental cleanup.

#### Aquatic Ecosystem Initiatives

- Water Discharge Standards
- Action plan to reducing plastic waste
- Reducing marine pollution (policy)
- Minimizing alteration of aquatic ecosystems
- Sewage treatment plant
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