

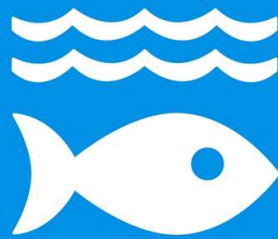


AMITY
UNIVERSITY
— HARYANA —

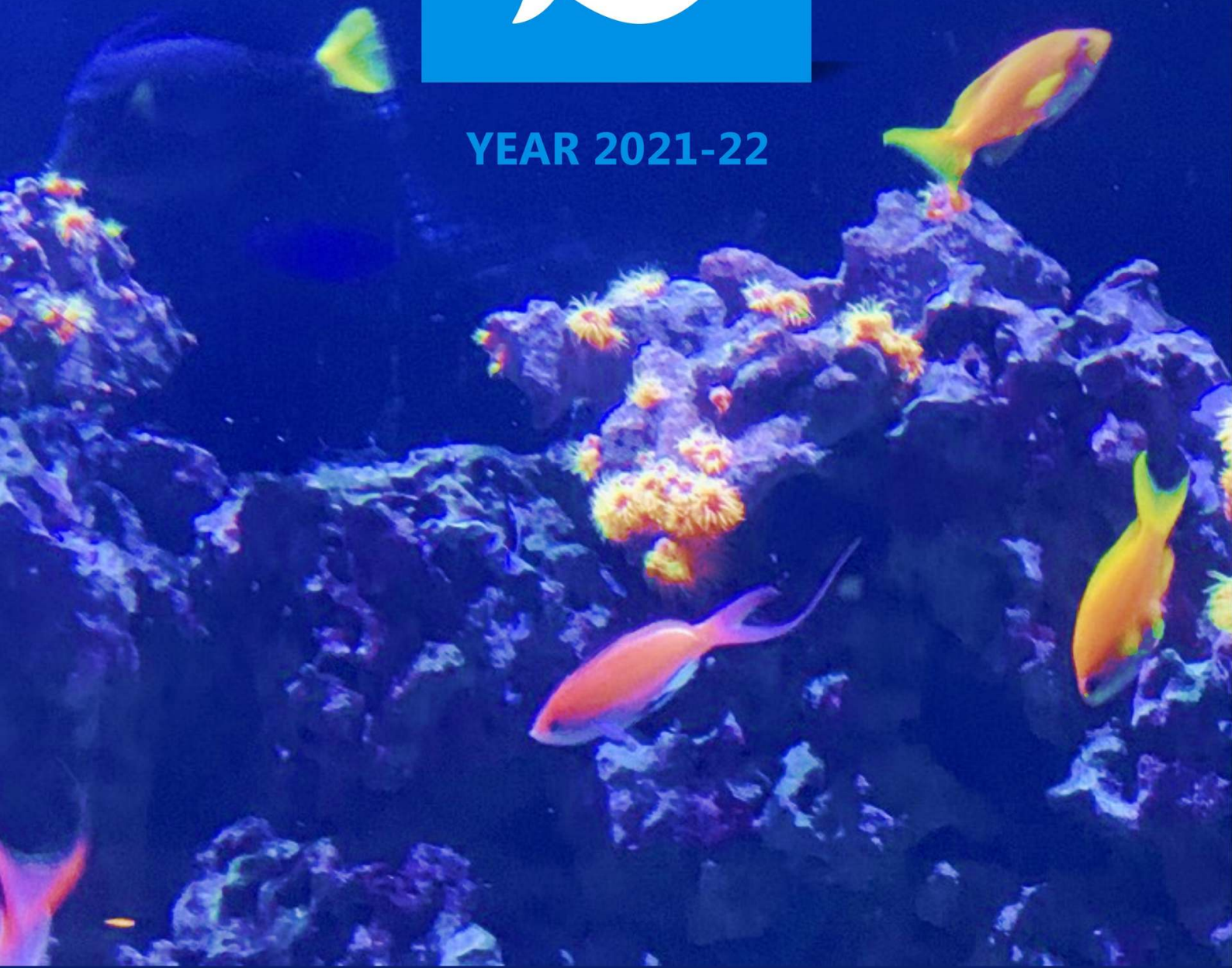
NAAC 'A'
GRADE
ACCREDITED UNIVERSITY

REPORT ON SUSTAINABLE DEVELOPMENT GOAL

14 LIFE
BELOW WATER



YEAR 2021-22



PREAMBLE

Amity University Haryana is directly and indirectly contributing to protect the marine pollution and conserving the ground water, protecting ponds in neighborhood region, adopting efficient water management practices and minimizing the plastic usage.

WASTE MANAGEMENT POLICY

The University has Solid Waste Management Policy aimed at following objectives:

- Protect the environment and public health
- Conserve natural resources
- Minimize landfilling and/or incineration and reduce toxicity

The following table lists recyclable wastes at the campus and their disposal method and handling procedures:

Source/Consumables	Disposal Method	Handling Procedure
Glass, Plastic, Metals, Paper/newspapers, Cardboard	Building occupants dispose of these recyclables in separately provided collection points on each floor. Cleaning staff sorts commingled recyclables out of the trash and delivers to central waste collection area.	Amounts are tracked and taken away by hauler on a regular basis for recycling.
Mercury-containing Lamps	Custodial staff collects fluorescent lamps and stores the unbroken lamps for disposal.	Taken away by an authorized hauler for safe disposal, in accordance with local regulations on disposal of products containing mercury.
Batteries	Building occupants deliver batteries to a specially-designated collection point for disposal.	Taken away by an authorized hauler on a regular basis for proper disposal.
Durable Goods (Electronic Waste and Furniture)	Building management provides a secure collection area to store durable goods that have reached the end of their life within the building but still have value and may be donated/re-used.	Amounts are tracked and taken away by an authorized hauler or re-use center on a regular basis for recycling.
Building Materials	Building management coordinates with contractors to collect construction waste for re-use/recycling.	Amounts are tracked and taken away by an authorized hauler at the end of the demolition/ construction period for recycling.
Toner/Cartridges	IT department keeps waste toner/cartridge at a designated area.	Amounts are tracked and taken away by the vendor to replace with the new ones.

WATER CONSERVATION AND RAINWATER HARVESTING

Rainwater harvesting facilities, which comprise an intricate network of wells dispersed around the campus, have been a crucial component of the university's expansion strategy from its founding. The watershed contour of this region is used to determine the position and size of such water collecting equipment, ensuring maximum rainfall harvesting.

- Number of wells: 43
- No of bores: 112

Periodical cleaning of Rainwater harvesting wells is carried out to ensure their efficiency for groundwater recharge. Proper operation and maintenance is followed to facilitate efficient water harvesting.

Water Conservation Measures: By implementing a network of rainwater collection and wastewater/effluent water treatment infrastructure and reuse, the AUH campus is dedicated to achieving

zero water discharge. This will guarantee efficient and optimal water utilisation. The institution has sophisticated systems in place to handle wastewater produced by its many departments, including administrative, residential, and laundry facilities. To guarantee effective utilisation, STP and ETP performance and efficiency are routinely assessed. Immediate remedial action is taken to rectify any problem to ensure water conservation and safety. Wastewater generated by the University are of two types:

- Sewage Waste
- Laboratory, Laundry and Cafeteria effluent waste

The above waste is treated through Sewage Treatment Plants (STPs) and Effluent Treatment

Plants (ETPs). The following are the details of STPs and ETPs installed in the university

STP	Location	Capacity in Liters/day	Type
STP1	Near Faculty Flats	4,50,000	Aerobic
STP2	Near Faculty Flats	4,50,000	Anaerobic

ETP	Location	Capacity in Liters/day	Type
ETP1	Near Faculty Flats	50,000	Kitchen
ETP2	Near Faculty Flats	20,000	Laundry

University strives towards developing water conservation and water efficiency through following strategies:

1. Promote water efficiency practices by spreading awareness among Students, Faculty & Staff.
2. Monitor and minimize the University's water consumption.
3. Promote planting indigenous trees in and around the University to reduce water usage.
4. Water samples are tested every quarter and record maintained.
5. All the roof top water is guided to the Rainwater Harvesting Wells.
6. Sustain implementation of innovative water-efficient technologies such as rainwater harvesting, reuse water etc.

Annual cleaning work of all the Rainwater Harvesting pits is executed before the monsoon and the photographs are attached for reference



Maintenance of water harvesting structures before rainy season



AUH HAS BEEN AWARDED A HIGH SOCIETAL IMPACT PROJECT TO REJUVENATE A WASTEWATER POND AT NEARBY BILASPUR VILLAGE IN HARYANA BY USING NANO TECHNOLOGY AND TRANSFER INTO A FRESH WATER POND. THE PROJECT WAS FUNDED BY GURUJAL AND UNDERTAKING HOME MINISTRY OF JAL SHAKTHI, GOVERNMENT OF INDIA.

Using a 100KLD Moving Bed Biofilm Reactor method and ferrite-based nanoparticles as heavy metal adsorbents, the primary goal of this study was to clean the pond. We are in the process of reviving the pond. After the project is finished, the lifestyles of over 10,000 people will be improved, which will improve the environment of the region. Three research publications and two patent applications have been made based on the wastewater treatment idea.

Based on invention on water treatment project, local communities provided water

management educational opportunities and learned about the sustainable water management practices.

The project offers the following benefits to society:

- Rejuvenation of the local water body into freshwater pond.
- Enhanced Cleanliness and hygiene.
- Availability of consumable water.
- Using solar green energy to run the plant.



PLASTIC FREE CAMPUS

The campus is trying its best to minimise the use of plastic. In this concern the stores and even the food stalls are motivated to use paper and jute bags for

packing. In this regard other activities are like Swachh Bharat Abhiyan, Farmer Training & Herbal Garden

RESEARCH AND PUBLICATIONS

- **High impact research:**

- Khan AA, Pant NC, Joshi R, Devara PCS. Chemical and isotopic variability of Bhagirathi river water (Upper Ganga), Uttarakhand, India. Ecological Significance of River Ecosystems: Challenges and Management Strategies; 2022. p. 133-146.
- Sharma K, Vaya D, Prasad G, Surolia PK. Photocatalytic process for oily wastewater treatment: a review. Int J Environ Sci Technol 2022.
- Mahamood M, Javed M, Alhewairini SS, Zahir F, Sah AK, Ahmad MI. Labeo rohita, a bioindicator for water quality and associated biomarkers of heavy metal toxicity. npj Clean Water 2021;4(1)
- Kumar V, Srivastava S, Thakur IS. Enhanced recovery of poly hydroxy alkanoates from secondary wastewater sludge of sewage

treatment plant: Analysis and process parameters optimization. Bioresour Technol Rep 2021;15

- Naveen BP, Sitharam TG, Sivapullaiah PV, Kumar S. Geophysical techniques for characterisation of municipal solid waste landfills. Proc Inst Civ Eng Waste Resour Manag 2021;174(3):78-96.

Patent: Hon'ble Founder President Dr. Ashok K. Chauhan, Dr. P. B. Sharma, Dr. Indu Shekhar, Dr. Shalini Bhaskar Bajaj, Dr. Manoj Kumar Pandey and Dr. W. Selvamurthy AUH, Gurgaon campus A system for saccharification, gasification and upgradation of lignocellulose waste for production of green energy 30-06-2022 202211037786

- **Copyright:** 16462/2022- CO/L Design prototype for automated segregation of inorganic solid waste components Dr. Naveen BP, Mohammed Yassen, Department of Civil Engineering, AUH, Manesar campus Filed 2-Aug-22.

HAPPENING & EVENTS

- Webinar on Green Technologies for mitigation of Global Warming & Climate Change in April 2022, by Mr. R.V. Shahi Chairman Mechanical Engineering Energy Infratech Pvt..Ltd, Dr. Ajay Mathur Director General Chemical Engineering International Solar Alliance, Dr. Arun Kumar Tripathi Adviser, Agriculture Engineering Ministry of New & Renewable Energy, Government of India, Dr. Ashok Kumar Dy. Director General Mechanical Engineering Bureau of Energy Efficiency, Shri S. N. Tripathi Executive Director Mechanical Engineering Project Management, NTPC, Dr. Jai Prakash Singh Director Electrical Engineering NISE, Ms. Debjani Bhatia Addnl. General Manager Masters in Renewable Engineering Technical Services & Business Head, IREDA,

Helped the students and faculty members to understand the emerging trends of various aspects in Civil Engineering and their importance including environmental aspects of the construction industry.

- Outreach program organized on World Environment Day 2022 (Only One Earth) in June 2022, it showcased that there is a need for consistent efforts by the entire mankind to save the planet. Even, a small amount of effort by every individual could lead to mark a huge difference to save the mother nature. On this World Environment Day students realized how every individual could put in small efforts, to make huge differences to save earth.

The United Nations Sustainable Development Goals (SDGs) are the focus of Amity University Haryana of Eminence. The four pillars of our approach to the SDGs are research, teaching, basic institutional practices, and collaborations.

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