



REPORT ON SUSTAINABLE DEVELOPMENT GOAL



SDG 12:
Year 2022-23





PREAMBLE: SDG-12

Goal 12 is about ensuring sustainable consumption and production patterns, which is key to sustain the livelihoods of current and future generations. At Amity University Haryana we are focused and strive to promote sustainable management practices and efficient use of resources by implementing sustainable management policies and promote efficient use of natural resources for decoupling economic growth. The rising population is also a threat to food consumption and wastage of food is an area wherein the youth need to ponder.

COURSES COVERING SDG

At Amity students spread this message to the community via various programs and through research it displays sustainable development impacts for sustainable tourism that creates green jobs and promotes local culture. The students under the CBCS system have an opportunity to opt from a basket of Value-added courses/ minor tracks to understand the sustainable development goals as the curriculum of the university is aligned with all SDGs. The students of various programs such as Fine arts, Fashion design and technology are given projects on the 4Rs so that individuals can also adopt more sustainable lifestyles – this can involve consuming less, choosing products with lower environmental impacts, and reducing unnecessary wants.

Programme Level	Name	URL
MBA (Sustainable Management)	Post Graduate	https://www.amity.edu/gurugram/mba-sustainability-management
Executive MBA (Sustainable Management)	Post Graduate	https://www.amity.edu/gurugram/executive-mba-sustainability-management
M.Tech. (Solar & Alternate Energy)	Post Graduate	https://www.amity.edu/gurugram/mtech-solar-and-alternate-energy
M.Sc. (Renewable Energy)	Post Graduate	https://www.amity.edu/gurugram/msc-renewable-energy
M.Tech (Atmospheric Technology and Climate Management)	Post Graduate	https://www.amity.edu/gurugram/mtech-atmospheric-technology-and-climate-management
M.Sc. (Environmental Sciences and Management)	Post Graduate	https://www.amity.edu/gurugram/msc-environmental-sciences-and-management
B.Sc. (Hons) - Earth Sciences	Under Graduate	https://www.amity.edu/gurugram/bsc-hons-earth-sciences
Ph.D. (Earth and Environmental Sciences)	PhD	https://www.amity.edu/gurugram/phd-earth-and-environmental-sciences



MINOR SPECIALIZATION ELECTIVE TRACK OFFER TO ALL UNDER GRADUATE PROGRAMMES

S.No.	Track with details of courses
1	<p>Climate Science</p> <p>Semester 1- AST2151- Basics of Climate Science</p> <p>Semester 2- AST2251- Introduction to Earth System Science</p> <p>Semester 3- AST2351- Cloud Microphysics and Chemistry</p> <p>Semester 4- AST2451-Climate Change: Impact, Vulnerability and Adaption</p> <p>Semester 5- AST2551- Primer of Oceanography</p> <p>Semester 6- AST2651- Fundamentals of Climate Variability and Modeling</p>
2	<p>Disaster Management & Sustainable Built Environment</p> <p>Semester 1-DSM2151-Introduction to Disaster Management Semester</p> <p>2-DSM2251-Resilience Building for Built Environment Semester</p> <p>3-DSM2351-Emergency Management</p> <p>Semester 4-DSM2451-Rehabilitation Reconstruction and Recovery</p> <p>Semester 5-DSM2551-Climate Change Adaptations and Sustainable Development</p> <p>Semester 6-DSM2651-Geoinformatics in Disaster Management</p>
3	<p>Dietetics & Nutrition</p> <p>Semester 1-DAN2151-Principles of Nutrition</p> <p>Semester 2-DAN2251-Family Meal Management</p> <p>Semester 3-DAN2351-Basics Dietetics</p> <p>Semester 4-DAN2451-Advanced Dietetics</p> <p>Semester 5-DAN2551-Community Nutrition</p> <p>Semester 6-DAN2651-Food Chemistry</p>
4	<p>Environmental Management</p> <p>Semester 1- ENV2151- Environmental Studies-I*</p> <p>Semester 2- ENV2251- Environmental Studies-II*</p> <p>Semester 3- ENV2351-Environmental Pollution and Waste Management</p> <p>Semester 4- ENV2451-Environmental Management and Industrial Safety</p> <p>Semester 5- ENV2551-Environmental Economics and Globalization</p> <p>Semester 6- ENV2651-Sustainable Development Practices</p>



5	<p>Entrepreneurship</p> <p>Semester 1-MGT2152-Orientation Programme in Entrepreneurship</p> <p>Semester2-MGT2252-Exploring Business Opportunity</p> <p>Semester 3-MGT2352-Developing a Business Model</p> <p>Semester 4-MGT2452-Translating Business Model into Startup</p> <p>Semester 5-MGT2552-Advanced Programme in Entrepreneurship: Growth</p> <p>Semester 6-MGT2652-Advanced Programme in Entrepreneurship: Expansion</p>
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GOVERNANCE AND WASTE MANAGEMENT PRACTICES

Amity University Haryana being an educational institution, the key operations do not significantly impact the environment. It ensures that all the stakeholders have the relevant information and awareness for sustainable development and lifestyles in harmony with nature. The laid down systems and procedures at AUH involves practices such as reusing, refurbishing, and recycling products to minimize waste and resource depletion.

Amity University Haryana is placing a strong emphasis on recycling and reusing waste under its Waste Management Policy, to save natural resources, safeguard public health and the environment, decrease toxicity and reduce landfilling /or incineration.University is committed to producing as little waste as possible and recycling it by running it through a mechanism that makes the material reusable, following the UN mandate to establish the institution as a "**live lab of sustainability.**"

Numerous systems, such as those for collecting rainwater, treating wastewater and effluent, ensuring adequate drainage patterns, Air Pollution Monitoring unit and many more, have been included in the university's growth plan since its inception. The waste generated in university is divided into three different types for their management and disposal, which is as follow:

- (a) Solid Waste
- (b) Liquid Waste
- (c) e-waste and other hazardous waste

SOLID WASTE MANAGEMENT:

The university generates various types of waste as part of its daily operations, including paper, plastic, glass, metal, food waste, and more. Waste is segregated at every stage and source. The administrative supervisor of each block ensures that waste is collected from each floor at designated times.

Housekeeping staff on each floor are responsible for collecting waste in the dustbins provided. These floor dustbins are then emptied into larger, movable containers assigned to each block, which are transported to the university's disposal yard.





The university has partnered with an approved waste management vendor, who collects the waste from the designated location, separates it, recycles appropriate materials, and disposes of the remaining waste in government-approved landfills.

The organic waste collected from the farmhouse is processed through the campus's biogas production and composting systems. The by-products of this process are then used locally for heating purposes and as manure for sustainable farming practices.'



Liquid Waste Management: The liquid waste generated by the university falls into two categories:

- (i) **Sewage waste**
- (ii) **Effluent waste** (from laboratories, laundry, and cafeterias)

These wastes are processed through a network of Effluent Treatment Plants (ETPs) and Sewage Treatment Plants (STPs), which utilize both aerobic and anaerobic processes to treat organic waste. After initial treatment, the wastewater undergoes further filtration and is reused for various purposes, including cooling systems, horticulture, agricultural irrigation, and toilet flushing. Laundry wastewater is treated separately through a dedicated treatment facility.

A trained and experienced team is responsible for the operation and maintenance of the sewage and effluent treatment plants, ensuring their efficient functioning. During the winter and monsoon seasons, treated water is used to replenish groundwater, contributing to water conservation.

The following are the details of STPs and ETPs installed in the university

STP	Location	Capacity in Liters/day	Type
STP 1	Near Faculty Flats	4,50,000	Aerobic
STP 2	Near Faculty Flats	4,50,000	Anaerobic

ETP	Location	Capacity in Liters/day	Type
ETP 1	Near Faculty Flats	50,000	Kitchen
ETP 2	Near Faculty Flats	20,000	Laundry



Liquid Waste Disposal Plan

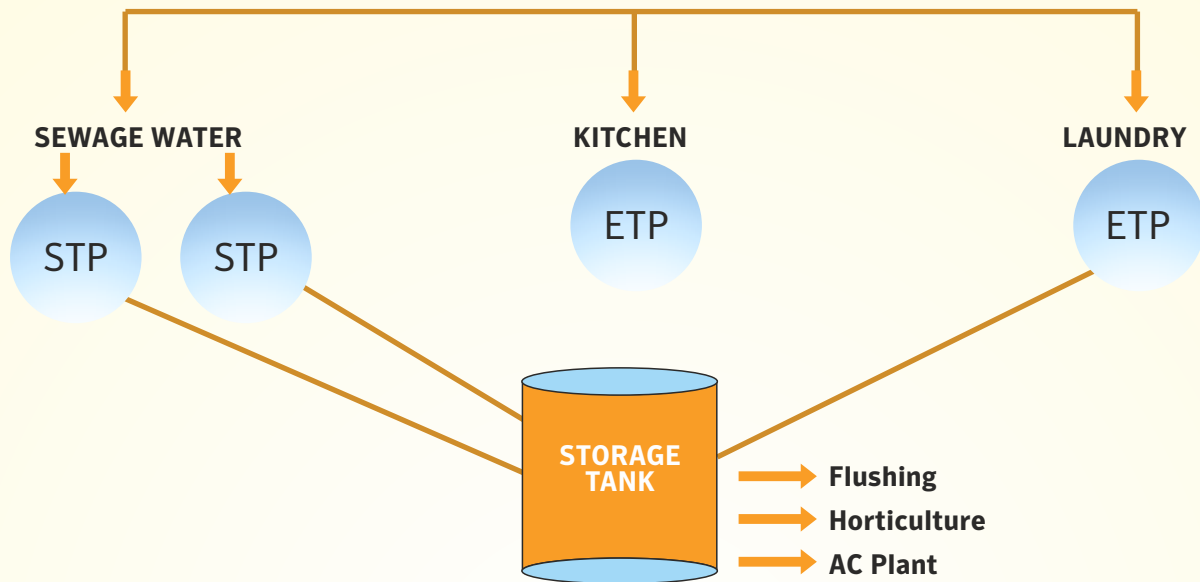


Fig.: Liquid waste management plan including treatment/recycling and reuse



Pump Room



Oxidation Pond



ETP Laundry Unit



ETP



E-WASTE MANAGEMENT:

Electronic items such as desktops, printers, cameras, Wi-Fi devices, used toner cartridges, speakers, mice, keyboards, UPS units, projector screens, and biometric machines are responsibly recycled by the university. The IT department tracks each electronic device provided, ensuring it operates at peak efficiency throughout its lifespan and is properly disposed of once it reaches the end of its useful life.

Rather than purchasing new equipment, the university prefers the buy-back option for technological upgrades. Authorized suppliers, listed below, are responsible for managing the disposal of e-waste, particularly hardware that cannot be recycled or reused.

RESEARCH AND PUBLICATIONS:

- Nain. A & Awasthi A. Sustainable Tourism Post COVID-19: Perspectives & Possibilities. International Journal of Advances in Engineering and Management, Feb 2022
- Nain. A & Roy. A. Responsible Tourism: A Need of Tourism & Hospitality Industry Post Covid-19. International Journal of Trend in Scientific Research and Development, April 2022
- bolfazl Mehbodniya , Ihtiram Raza Khan, Sudeshna Chakraborty, M. Karthik , Kamakshi Mehta, Liaqat Ali , and Stephen Jeswinde Nuagah, Data mining in employee healthcare detection using intelligence for industry development, Journal of Health care Engineering, Jan 2022
- Kumar. A. & Dhameliya . T. Sustainable approaches towards the synthesis of quinoxalines: An update. Journal of Molecular Structure. March 2022.
- Gupta S., Kaushal A., Kala D., Saini A.K., Saini R.V., Kumar A., Kumar D. An Approach for the Development of Immunochip for the Detection of Celiac Disease based on Anti-Gliadin Antibodies Quantification. Biointerface Research in Applied Chemistry, 2023.
- Khatri P., Rani A., Hameed S., Chandra S., Chang C.-M., Pandey R.P. Current Understanding of the Molecular Basis of Spices for the Development of Potential Antimicrobial Medicine. Antibiotics, 2023
- Pandey. A , Lata. M. Examining the predictors of environmentally responsible tourism behaviour during covid- 1, Journal of Content, Community & Communication, Feb 2023, pp-226-23
- Singh. S, Jha. S.K. Urban Waste Management. Journal of Emerging Technologies and Innovative Research (JETIR). Feb,2023

HAPPENINGS AND EVENTS

1. A workshop was conducted on 23 March 2023, on the theme "The Future of Weather, Climate and Water Across Generations," which successfully brought together experts and participants to discuss the importance of meteorology and its impact on various sectors. The expert speakers included Dr. M. Mohapatra, Director General of Meteorology at IMD, Ministry of Earth Sciences; Air Vice Marshal Prof. Ajit Tyagi, President of South-Asia Meteorological Association (SAMA); and Prof. Sushil Kumar Dash, Immediate Past President of Indian Meteorological Society (IMS).

2. **G20 Sensitization Lecture on Science and Technology for Sustainable Development** on 20 April, 2023 was organised. Dr. Vijay Kumar Saraswat, Hon'ble Member of NITI Aayog and Chancellor of Jawaharlal Nehru University during his highly inspiring address, emphasised on the role of Science and



Technology in driving Sustainable Development in India and around the world. The challenges facing India, such as climate change, air pollution, water scarcity, and energy security, require innovative and sustainable solutions that can only be achieved through the application of science and technology. In the question answer session, Dr. Saraswat interacted with the young minds who asked searching questions on India's growth and development initiatives and the futuristic science and technology for sustainable development.

3. Lecture on India's Science-20 Thrust during the G20 Presidency on 31 May, 2023 Considering the role of Universities in India in Nation building, scientific advancement and technology innovations, the G20 University Connect Program plays a vital role in connecting the youth to the national missions and global aspirations being served under India Missions like Sustainable and Inclusive Development, Green Energy Transition, Promoting Eco-friendly Lifestyle under the Mission LiFe, funding Green Growth and arresting Climate Change. Vice Chancellor, Prof PB Sharma while welcoming Prof NK Mehra, Vice President of Indian National Science Academy, INSA at the S20 Invited Lecture under the G20 University Connect Program. The Amity University Haryana, Centre of Excellence for Innovation in Education, organized today the S20 Invited Lecture on "India's Science-20 Thrust during the G20 Presidency," by distinguished medical scientist Prof Narinder K Mehra, Vice President of INSA and former Dean and National Chair AIIMS New Delhi.

4. Seminar on "Integrated Approach in Science, Technology and Skilling for Sustainable Future" on 16 May 2023 was organized where 150 UG and PG students participated in this program which was spread throughout the day. The forenoon was dedicated to the technical session which involved three expert lectures from industry stalwarts. The afternoon session included events like science quiz competition and innovative idea presentation by UG and PG students. Resource persons include Dr. Rahul Taneja, Scientist, Patent Information Centre, Haryana State Council for Science and Technology, DST, Government of Haryana; Prof. Rakesh Bhatnagar, National Science Chair, School of Biotechnology JNU; and Prof. Vijay K. Chaudhary NASI-Senior Scientist, CIIDRET, DU.

5. The Amity School of Architecture and Planning hosted the "**Jute Kalakari**" competition on April 19, 2023, with the goal of inspiring students to think imaginatively and create valuable things out of unwanted objects to practice 4Rs. Jute Kalakari is a type of art that reflects ethnic symbols and topics by fusing traditional painting techniques with jute cloth. It's a stunning, environmentally friendly art form that celebrates diversity of culture. It gives learners an adaptable way to develop their creativity without losing sight of their heritage. The event's goal is to instil in the students the desire to upscale and create environmentally friendly, visually beautiful,



Snap shots of Events organised

World Meteorological Organization (WMO) Day

THEME: THE FUTURE OF WEATHER, CLIMATE AND WATER ACROSS GENERATIONS

Online Webinar on 23 March 2023 | 10:30 AM

Organized by
Amity Centre for Ocean-Atmospheric Science and Technology (ACOAST) and Amity Centre for Environmental Science and Health (ACEESH), in Collaboration with Amity Academic Staff College (AASC), Amity University Haryana (AUH), Gurugram, India

DISTINGUISHED EXPERTS

Dr. M. Mohapatra Director General of Meteorology DGMD, IMD, MoES, Govt	Air Vice Marshal (Retd.) Raji Taneja, VSM President, South Asia Met. Association & Ex-DGM (MD), MoES, Govt	Prof. S.K. Doshi Immediate Past President, IMS, MoES, Govt

EMINENT SPEAKERS

Prof. P.B. Sharma Vice Chancellor AUH, Gurugram	Prof. Vikas Mishra Pro Vice Chancellor AUH, Gurugram	Prof. P.C.S. Devara Director, ACOAST/ACEESH AUH, Gurugram	Dr. A.A. Khan Head, ACAPC Program Director, AASC AUH, Gurugram	Dr. Sanjna Vij Program Director, AASC AUH, Gurugram





COMMUNITY ENGAGEMENT AND OUTREACH

Students are encouraged to take up a project addressing the community needs for sustainable consumption and production. Awareness with respect to reduction of food wastages, recycling and reuse of materials, water conservation, substances polluting the natural resources is created among the nearby areas and villages. Students' clubs at AUH are actively involved through outreach activities and communicate the significance of recycling the water and ways to manage household waste daily. The importance of not wasting food and ensuring that the food is shared with the needy instead of throwing it in garbage and wasting resources as the survival of many societies and the biological support systems of the planet is at risk.



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