

Progress Towards SDG 12



**Ensure sustainable
consumption
and production
patterns**

Daffodil International University



August 2023

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SDG 12:

Sustainable Development Goal 12, titled "responsible consumption and production", is one of the 17 Sustainable Development Goals established by the United Nations in 2015. The official wording of SDG 12 is "Ensure sustainable consumption and production patterns".

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DIU's contributions and Progress:

DIU GreenGarden and Food Court source required food and supplies considering health safety, hygiene, organic issues.
DIU has established an organic waste management system in campus
DIU has established an inorganic waste management system in campus
DIU has established a sustainable sewage disposal system in campus
DIU is following plastic reduction policy in campus
Total organic waste produced: 21.90 metric ton and recycled 16.20 metric ton
Total inorganic waste produced: 6.05 metric ton and recycled 4.6 metric ton

Various Waste Management Initiatives at DIU:



Organic waste management system:



Inorganic Waste Management



Hazardous Chemical Handling with Proper Safety and Care:



Proper Labeling of Chemicals:



Toxic Waste Disposal:

The lab chemical and toxic waste disposal system is covered by the approved Lab SOP of DIU.

Identification of chemicals:

This is important because different chemicals have different disposal requirements.

Separation of incompatible chemicals:

Some chemicals can react with each other and create hazardous fumes or explosions. It is important to separate these chemicals so that they do not come into contact with each other.

Labeling of the containers:

All containers of chemical waste are labeled with the following information-

- The name of the chemical
- The concentration of the chemical
- The date when the waste was generated
- The type of disposal (e.g., hazardous waste, sanitary sewer drain disposal etc.)

Disposing the waste properly:

The disposal method for liquid chemical wastes vary depending on the type of chemical. Some common methods of disposal include-

- Sanitary sewer drain disposal: This method is only allowed for certain types of chemicals.
- Chemical waste program: This program is for hazardous waste that cannot be disposed of in the sanitary sewer

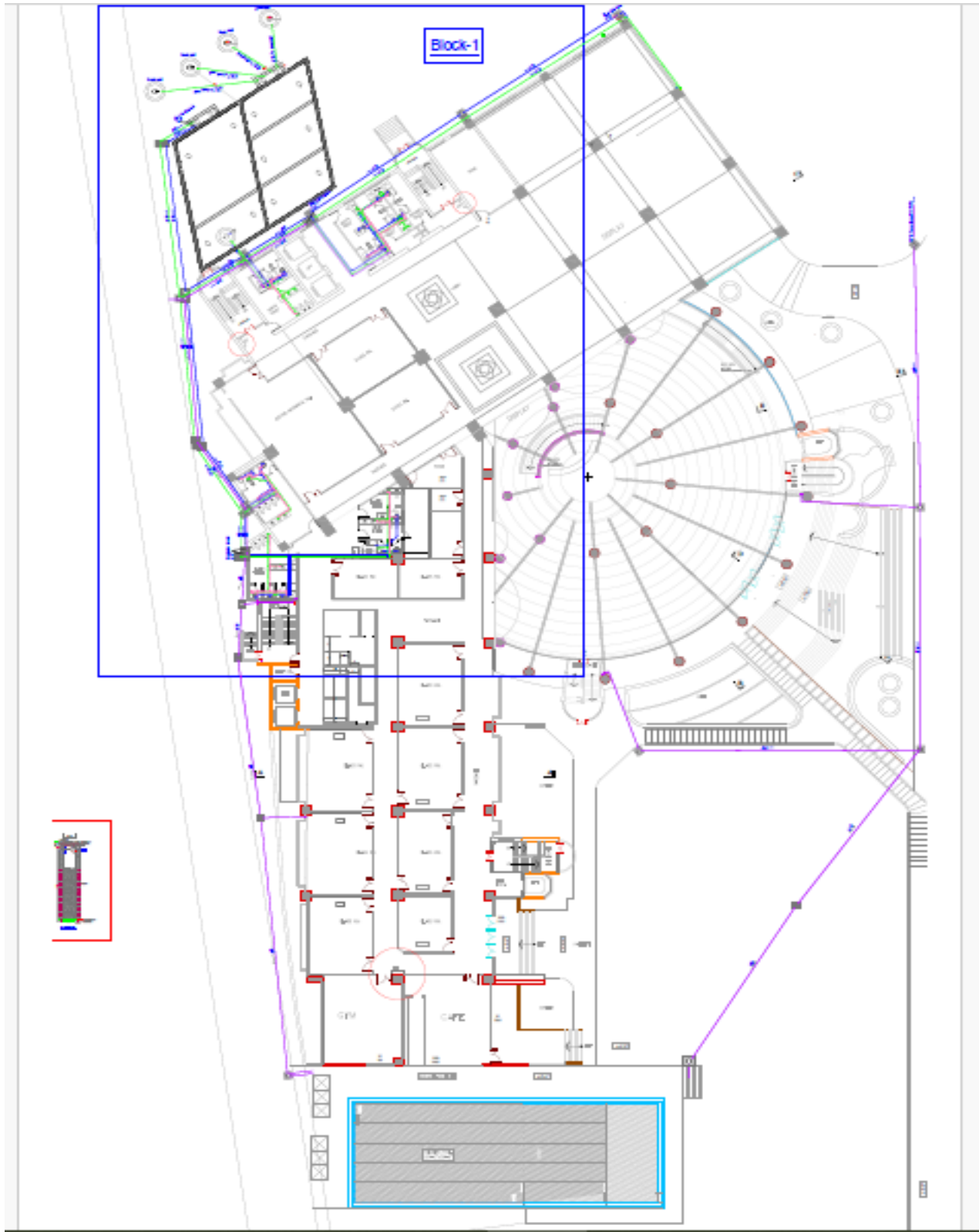


Reuse and reduction of Plastic & Paper use



DIU Follows printing on Two sides of the paper and all staff are well informed that no document should be printed unless very essential. Besides, most of the meetings of DIU are organized in an online platform and all communications and memorandums are circulated through email and self-developed SmartEdu online platform, ensuring substantial reduction in paper use.

Sewage System at DIU



Contributions to Knowledge:

The researchers of Daffodil International University conducted research and subsequently published the research results in reputed journals that contributed to the knowledge domain of SDG-12. Below is a highlight of such contribution:

SL	Article Title
1	Medical Waste in Bangladesh, its Causes and Impacts on Environment and Human Health: An Overview
2	First-principles quantum treatment of electron-phonon interactions in thin-film nanodevices
3	A Comprehensive Review on the Sustainable Treatment of Textile Wastewater: Zero Liquid Discharge and Resource Recovery Perspectives
4	Knitted Denim Fabrics: Fabrication Process and Fibrous Influence on Several Properties of the Fabric
5	Influence of spin-orbit coupling and biaxial strain on the inorganic lead iodide perovskites, APbI ₃ (A = K, Rb, and Cs)
6	Inventory management with hybrid cash-advance payment for time-dependent demand, time-varying holding cost and non-instantaneous deterioration under backordering and non-terminating situations
7	Polyurethane (PU) based multifunctional materials: Emerging paradigm for functional textiles, smart, and biomedical applications
8	Sustainable Food Waste Recycling for the Circular Economy in Developing Countries, with Special Reference to Bangladesh
10	Modelling sustainable manufacturing practices effects on sustainable performance: the contingent role of ownership
11	What Influences Home Gardeners' Food Waste Composting Intention in High-Rise Buildings in Dhaka Megacity, Bangladesh? An Integrated Model of TPB and DMP
12	Analysis of student sentiment during video class with multilayer deep learning approach
13	Natural biopolymeric nanotechnology-based food packaging materials with antimicrobial properties
14	Removal of Copper from spiked Aqueous Solution Using Activated Carbon of Rice Husk
15	Forecasting e-waste recovery scale driven by seasonal data characteristics: A decomposition-ensemble approach
16	Fiber types and fabric structures influence on weft knitted fabrics
17	Textile colouration with natural colourants: A review
18	Strategies for Enhancing Construction Waste Recycling: A Usability Analysis
19	Efficient way for chemicals identification using hexagonal fiber with the terahertz (THz) band
20	Combination of fabric phase sorptive extraction with UHPLC-ESI-MS/MS for the determination of adamantane analogues in human urine
21	Effects of Stores' Environmental Components on Chinese Consumers' Emotions and Intentions

	to Purchase Luxury Brands: Integrating Partial Least Squares-Structural Equation Modeling and Fuzzy-Set Qualitative Comparative Analysis Approaches
22	Green Metallic Nanoparticles: Biosynthesis to Applications
23	Fabric phase sorptive extraction combined with gas chromatography-mass spectrometry as an innovative analytical technique for the determination of selected polycyclic aromatic hydrocarbons in herbal infusions and tea samples
24	Fabric Phase Sorptive Extraction for the Determination of Anthracyclines in Sewage
25	Strain-Driven Optical, Electronic, and Mechanical Properties of Inorganic Halide Perovskite CsGeBr ₃
26	Glass Production from River Silica of Bangladesh: Converting Waste to Economically Potential Natural Resource
27	Development of highly hydrophobic fabric phase sorptive extraction membranes and exploring their applications for the rapid determination of tocopherols in edible oils analyzed by high pressure liquid chromatography-diode array detection
28	Determination of synthetic opioids in oral fluid samples using fabric phase sorptive extraction and gas chromatography-mass spectrometry
29	PestDetector: A Deep Convolutional Neural Network to Detect Jute Pests
30	Prospects and challenges of polymer nanocomposites for innovative food packaging
31	IoT Adoption by the Young Consumer: An Extended ASE Perspective
32	Performance Analysis of Linearly Arranged Concentric Circular Antenna Array with Low Sidelobe Level and Beamwidth Using Robust Tapering Technique
33	Paradoxes on sustainable performance in Dhaka's enterprising community: a moderated-mediation evidence from textile manufacturing SMEs
34	Design and Implementation of Intelligent Dustbin with Garbage Gas Detection for Hygienic Environment based on IoT
35	Flexible screen-printed amperometric sensors functionalized with spray-coated carbon nanotubes and electrodeposited Cu nanoclusters for nitrate detection
36	Bast Fiber Reinforced Green Polymer Composites: A Review on Their Classification, Properties, and Applications
37	Effect of abrasion and chemical treatment of recycled aggregate on the workability, strength, and durability properties of concrete
38	Quantification and Health Safety Assessment of Some Toxic Metals in Anti-Diabetic Herbal Preparations Collected from Local Retailers Using the XRF Analytical Tool

Activities and Events:

"Waste management and Inclusiveness"

Event at DIU

"Reuse the past, Recycle the present, Save the present " with this theme the precautionary program is organized under the title "Waste management and Inclusiveness" at Daffodil International University. The program was organized by SI Alumni Network in BD and Embassy of Sweden in Dhaka, Supported by Swedish Institute (SI), Sweden and hosted by Department of Nutrition and Food Engineering, DIU. A good number of students from various schools of the local community participated in the program.



Strengthening Textile Education and Industry Collaboration: DIU's MoA with PURBANI Group

The Department of Textile Engineering at Daffodil International University (DIU) signed a Memorandum of Agreement (MoA) with PURBANI Group on December 17th, 2022, aiming to enhance textile education and industry collaboration. This partnership aligns with SDG 4 (Quality Education) and SDG 9 (Industry, Innovation, and

Infrastructure). Under the MoA, students will benefit from industry-related opportunities, including visits, assignments, research projects, workshops, internships, and job placements, enriching their educational experience and contributing to the textile industry's growth and innovation. This collaboration empowers the next generation of textile professionals and promotes sustainable development in Bangladesh's textile sector.

Navigating Sustainable Textile Supply Chains: Insights from DIU Seminar

The Department of Textile Engineering at Daffodil International University recently organized a seminar on "Supply Chain Management in Textile Industry" at the International Conference Hall, Daffodil Smart City in Ashulia, Dhaka.

During the seminar, speakers delved into discussions about the global textile market, the state of the textile industry in Bangladesh, and the intricacies of the supply chain within the Bangladeshi textile sector. This informative event not only enhances knowledge but also aligns with Sustainable Development Goals (SDGs) by promoting sustainable practices within the textile industry.

