

# Progress Towards SDG 15



**Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss**

Daffodil International University



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*International*  
**University**

August 2023

# Progress Towards SDG 15

## SDG 15:

Sustainable Development Goal 15 (SDG 15 or Global Goal 15) is about "Life on land". One of the 17 Sustainable Development Goals established by the United Nations in 2015, the official wording is: "Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss".

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**DIU's Contributions and Progress:**

Total campus Planted area	193530 m2
Total tree planted on campus	5000+
Sustainably farming (vegetable) area on campus (Food)	20+ acres of land
Academic programmes on environmental ecosystem	3
Has a plastic reduction policy	Yes, implementing
Has SOP for hazardous waste handling and disposal	Yes, following
Follows water discharge guidelines	Yes, following

**Project summary of Determining the Status of Diseases of Natural Rubber Plant in Bangladesh**

Prof. Dr. Amin Uddin Mridha of DIU has been implementing a project with the support of Bangladesh Rubber Development Board on Determining the Status of Diseases of Natural Rubber Plant in Bangladesh. The project is contributing towards identification of new diseases of rubber plant leaves (SDG 15). The interim report primarily identified five isolates as Pestaliopsis, Neopestaleopsis and Pseudopestaleopsis fungi based on conidial characters. The main objective of the research project is to identify and determine the status of undiscovered diseases of natural rubber in Bangladesh so that further research can be undertaken to prevent those diseases.



Fig.2. Morphology of fungi on PDA plates after 7 days of incubation

### DIU Faculty Participated Cross Sectoral Conference

HRDI of DIU participated in LCOY Bangladesh (Local Conference of Youth 2023) to host a session titled "Planet Protectors: Teamwork for a Greener World." Mr. Amir Hamza from HRDI, DIU led the session using interactive activities and games to address environmental romanticism, key factors contributing to climate change, and nature-based solutions. The session engaged 250 participants from various regions across Bangladesh.

LCOY serves as a worldwide initiative to educate and mobilize youth on environmental factors and climate change.



### DIU-USAID PEER Partnership: Advancing Sustainable Forest Management Through Technology



The DIU-USAID PEER Project is at the forefront of sustainable forest management in Bangladesh, utilizing Unmanned Aerial Systems (UAS) for tree cover assessment and deforestation analysis. In a training and workshop program for the Department of Environmental Science and Disaster Management (ESDM) students, experts like Mr. Md. Jawadul Gani and Deputy Conservator of Forests, Md. Zaheer Iqbal, shared their insights. With the participation of esteemed guests, faculty, and students, this initiative aligns with the SDGs, contributing to responsible environmental stewardship and the preservation of Bangladesh's invaluable forests.

### 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-15. Below is a highlight of such contribution:

SL	Article Title
1.	Identification of the ecosystem services and plant diversity in Ramna Park Dhaka
2.	STUDIES ON PHYSICOCHEMICAL PROPERTIES OF BURIGANGA RIVER WATER AND THE VEGETATION COVERAGE OF SURROUNDING AREA, DHAKA, BANGLADESH
3.	MONITORING LAND USE AND LAND COVER CHANGES OF DHAKA CITY: A REMOTE SENSING AND GIS-BASED ANALYSIS
4.	The impact of Jhum cultivation on hilly area (Rangamati, Khagrachari)

5.	The Role of Social Networks on building Awareness and social responsibility to achieve Environmental Sustainability in Bangladesh
6.	Citizen's Perception on Eco-friendly Lifestyle for Conserving Endangered Oriental White Stork and Crested Ibis Bird Species in Japan–Case Studies in Toyoka, Sado and Konosu Cities
7.	Aquatic Microplastic Pollution Control Strategies: Sustainable Degradation Techniques, Resource Recovery, and Recommendations for Bangladesh
8.	Asymmetric impacts of foreign direct investment inflows, financial development, and social globalization on environmental pollution
9.	Prospective Asian plants with corroborated antiviral potentials: Position standing in recent years
10.	Anxiolytic, antidepressant and antioxidant activity of the methanol extract of <i>Canarium resiniferum</i> leaves
11.	Traditional Machine Learning and Deep Learning Modeling for Legume Species Recognition
12.	Tomato flu in India: A new emerging viral disease
13.	An automated approach for eggplant disease recognition using transfer learning
14.	RoseNet: Rose leave dataset for the development of an automation system to recognize the diseases of rose
15.	Fostering Green Innovation Adoption through Green Dynamic Capability: The Moderating Role of Environmental Dynamism and Big Data Analytic Capability
16.	VegNet: An organized dataset of cauliflower disease for a sustainable agro-based automation system
17.	The role of environmental transformational leadership in employees' influencing organizational citizenship behavior for environment well-being: a survey data analysis
18.	Synthesis of Boron-Doped Zinc Oxide Nanosheets by Using <i>Phyllanthus Emblica</i> Leaf Extract: A Sustainable Environmental Applications
19.	A Multiwall Path-Loss Prediction Model Using 433 MHz LoRa-WAN Frequency to Characterize Foliage's Influence in a Malaysian Palm Oil Plantation Environment
20.	Impact of Industrially Affected Soil on Humans: A Soil-Human and Soil-Plant-Human Exposure Assessment
21.	Amelioration of salinity induced damage in plants by selenium application: A review
22.	<i>Drosophila melanogaster</i> as a Versatile Model for Studying Medically Important Insect Vector-Borne Parasites
23.	Leaf Functional Traits of Invasive Grasses Conferring High-Cadmium Adaptation Over Natives
24.	Does agricultural ecology cause environmental degradation? Empirical evidence from Bangladesh
25.	A comprehensive guava leaves and fruits dataset for guava disease recognition
26.	An extensive sunflower dataset representation for successful identification and classification of sunflower diseases
27.	Dynamic linkages between climatic variables and agriculture production in Malaysia: a generalized method of moments approach
28.	Green Extraction Techniques as Advanced Sample Preparation Approaches in Biological, Food, and Environmental Matrices: A Review
29.	The laws of attraction: Role of green human resources, culture and environmental performance in the hospitality sector
30.	CNS depressant activities of <i>Averrhoa carambola</i> leaves extract in thiopental-sodium model of Swiss albino mice: implication for neuro-modulatory properties

31.	An Explorative Analysis on the Machine-Vision-Based Disease Recognition of Three Available Fruits of Bangladesh
32.	Melatonin Rescues Photosynthesis and Triggers Antioxidant Defense Response in Cucumis sativus Plants Challenged by Low Temperature and High Humidity
33.	Chemical descriptors, PASS, molecular docking, molecular dynamics and ADMET predictions of glucopyranoside derivatives as inhibitors to bacteria and fungi growth
34.	An in-depth exploration of automated jackfruit disease recognition
35.	Analysis of Recognition Performance of Plant Leaf Diseases Based on Machine Vision Techniques
36.	A DNA functionalized advanced electrochemical biosensor for identification of the foodborne pathogen Salmonella enterica serovar Typhi in real samples
37.	Martian Craters Detection Using Neural Network Approach from Grayscale Satellite Imageries
38.	Sonication microwave synergistic extraction of bioactive compounds from plant source
39.	A Comparative Study on Road Surface State Assessment Using Transfer Learning Approach
40.	Local Rose Breeds Detection System Using Transfer Learning Techniques

## Activities and Events:

### Exploring Environmental Conservation: ESDM Students' Field Trip to Bhawal National Park



A group of Environmental Studies and Disaster Management (ESDM) students at Daffodil International University conducted an educational field visit to Bhawal National Park in Gazipur, Dhaka. Led by faculty members, the trip aimed to raise environmental awareness and promote sustainable practices. The visit focused on biodiversity, ecosystem preservation, and sustainable land management, aligning with SDG 15 (Life on Land). This hands-on experience enhanced the students' understanding of environmental conservation and disaster risk reduction while instilling a sense of responsibility for the environment.

### Advancing Environmental Research: Dr. Mahfuza Parveen's Impactful Presentation at SnT2023

Dr. Mahfuza Parveen, an Associate Professor at Daffodil International University's Department of Environmental Science and Disaster Management, presented a significant paper titled "Integrating Comprehensive Nuclear-Test-Ban Treaty (CTBT) Data in Academic Research of Environmental Science and Disaster Management in Bangladesh" at the Science and Technology Conference 2023 (SnT2023) in Vienna, Austria. This event brought together experts, researchers, scientists, and academics to promote international collaboration and knowledge sharing. Dr. Parveen's presentation contributes to the field of Environmental



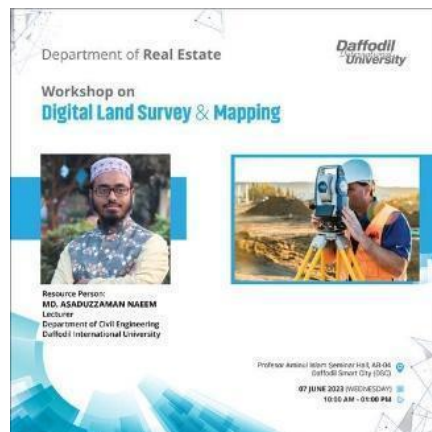
Science and Disaster Management and aligns with UN Sustainable Development Goals, particularly Climate Action (SDG 13) and Partnerships for the Goals (SDG 17).

### World Environment Day Celebration at Daffodil International University

On June 5th, the world observes World Environment Day, the Department of Environmental Science and Disaster Management at Daffodil International University, located in Daffodil Smart City, Savar, organized a series of events, including rallies, tree planting initiatives, and discussion sessions. These activities underscore the university's commitment to raising awareness and playing an active role in safeguarding the environment.



### Advancing Land Survey and Mapping: DIU's Workshop on Digital Techniques



The Department of Real Estate at Daffodil International University is set to host an enlightening workshop on Digital Land Survey and Mapping. This event, scheduled for June 7, 2023, at the prestigious Professor Aminul Islam Seminar Hall in Daffodil Smart City, Savar, Dhaka, aims to explore the cutting-edge innovations in digital survey methodologies and mapping technologies.

By embracing these digital advancements, the department is aligning itself with Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) and contributing to more efficient and precise land management practices in line with global sustainability objectives.

### Go Green: Cultivating Sustainability with DIU's Tourism and Hospitality Students

Daffodil International University's Department of Tourism and Hospitality Management organized the "Go Green" event on May 30, 2023, as part of their Sustainable Tourism course. Students from different batches participated under the guidance of Ms. Fairooze Waziha, their course instructor. The event focused on tree planting, introducing various tree species, and aligning with the United Nations' Sustainable Development Goals (SDGs) to promote environmental conservation and responsible tourism practices. This initiative represents a collective effort toward a greener and more sustainable world.





### Sustainable Agriculture for Empowering Entrepreneurs

The "Daffodil Agro Project," located in Gozaria, Munshiganj, is a sustainable agricultural initiative managed by DIU's Department of Nutrition and Food Engineering and Department of Innovation and Entrepreneurship. It focuses on cultivating organic fruits sourced from the Germplasm Center of Bangladesh Agricultural University. The project provides DIU students with opportunities for practical research, low-cost organic food production, and marketing, aligning with the United Nations Sustainable Development Goals (SDGs) and fostering entrepreneurship skills.