

# SUSTAINABILITY REPORT 2021

## STATUS OF SDGs

EDITED BY  
PROFESSOR DR. MD KABIRUL ISLAM

**Daffodil**  
International  
University



**DIVISION OF RESEARCH**  
**DAFFODIL INTERNATIONAL UNIVERSITY**

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**JULY 2021**

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## Foreword

Daffodil International University is a young university in Bangladesh. The university has been maintaining educational quality since its inception in 2002. The prime intention was to produce graduates to fulfil demand of the country and serve the society around them and beyond. Apart from academic and co-curricular activities, the teaching and learning communities are highly encouraged to engage themselves in various development initiatives executed nationally and globally. The university has reputations for its Information Technology (IT) supported infrastructure in Bangladesh and partnerships with the Government Organizations, industry, NGOs and international collaborators for their involvements in various development sectors. The stakeholders of the university are committed to work for the United Nations Sustainable Development Goals (SDGs). A lot of courses of different programs have been made aligned with the SDGs to acquaint the students with the challenges and identify solutions to act on it in a professional manner. Nevertheless, our contributions include several innovative projects which are under implementation at different departments and huge numbers of quality publications done by the faculty members jointly with the national and international partner universities. The Division of Research is managing a sustainability for development website to highlight our achievements and evidences and communicate to the international communities.

The sustainability report 2021- status of SDGs of DIU is an excellent initiative of the Division of Research. The report is a glimpse of the events, activities, ongoing projects, research outcomes and their significances, and the attainments. Mr. Mohammad Monir Hossain, Senior Assistant Director of the Division of Research has performed the key responsibility of collecting the facts and organizing the resources. Our esteemed colleagues from the Department of ESDM, Civil Engineering, Architecture, EEE, Public Health, Nutrition and Food Engineering and Law responded to my request in a timely manner and provided their scholarly inputs and outcomes. Our heartiest congratulations to the contributors for their owing performances.

Professor Dr. Md Kabirul Islam  
Director, Division of Research

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## 1. INTRODUCTION

### 1.1. Daffodil International University Viewpoint

Daffodil International University (DIU) is one of the leading private universities in Bangladesh, established on 24 January, 2002. The university aims to become a global leader in providing tertiary level education that produces graduates with high self-esteem who are able to accept challenges in a fast-changing environment. DIU provides higher education supported by 23 academic departments in the areas of Science and Technology, Engineering, Business and Entrepreneurship, Humanities & Social Sciences and Allied Health sciences aligning with the adoption of contemporary technological advancement in both bachelor and masters levels. The mission of the University are to:

- Supporting quality education and research, and implement latest educational pedagogies that nurture creativity, critical thinking and collaborative learning by students and faculty members
- Creating a research culture at the department level and the university as a whole and consequently, establish DIU as a Research University in international arena
- Promoting fundamental and applied research to fulfill the demand of the society and the global needs. In turn, special focus will be imposed on the national development agenda, digital Bangladesh vision, and the United Nations agenda for Sustainable Development Goals (SDGs)
- Promoting entrepreneurial education and develop entrepreneurial mindset among the students and encourage them to be able to self-employed
- Creating opportunity for underprivileged and rural populace access to higher education
- Conducting Human Resource (HR) development training suitable for local and global employers.

The University is serving the citizens of the country as well as the international knowledge seekers through its quality education for lifelong learning, research and publications, entrepreneurship initiatives, outreach programs, international collaborations and nurturing its graduates to respond positively towards national and global challenges. The students are provided broader access to the institution's educational resources. In a recent report, the University Grants Commission (UGC) of Bangladesh, has acknowledged that the highest number of international students studying at DIU in both bachelor and masters programs.

As a young university, DIU undertook lots of initiatives in various higher education domains and took part in international mobility programs for its internationalization. As a partner institute of Erasmus+ many students of DIU are studying in Turkey, Poland, Portugal, Italy, UK, Lithuania, and Finland with scholarships. The university has built a strong network and partnership with nearly four hundred universities/academic institutions in home and abroad for mobility of the teaching and learning communities in the form of inbound and outbound exchange programs which enables knowledge sharing, research collaboration, and internationalization. DIU has integrated an information technology (IT) supported system for managing its academic and administrative activities in a professional manner. DIU leads the Daffodil Education Network (DEN) that comprises 13 educational institutions of the Daffodil Family (DF) successfully.

## 1.2. The UN agenda for SDGs and DIU Context

According to United Nations, Sustainable Development Goals (SDGs) were adopted by its member states to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. The proper integration of policy interventions in all 17 areas of SDGs will lead to take action in one area will affect outcomes in others and eventually development must balance social, economic and environmental sustainability. As a higher education institute, Daffodil International University (DIU) is committed to response to this universal call for SDGs and take actions to comply with the United Nation's endeavor and to support the Government of Bangladesh for achievement of desired outcomes. In this regard DIU is working closely with the Government, private sector, civil society and citizens jointly for implementation of SDGs and to make sure that we create a better and sustainable planet for our future generations.



Figure 1. The UN agenda for Sustainable Development Goals

In the past few years, Daffodil International University has been striving to make a footprint in this arena through its contributions towards sustainable development initiatives. In order to promote achievement of certain SDGs through research and academic excellence DIU has established a separate academic department namely Department of Environmental Science and Disaster Management (ESDM). In addition, a number of departments for example, Civil Engineering, Architecture, Electrical and Electronic Engineering, Public Health, and Nutrition and Food Engineering undertake a lot of initiatives which are aligned with the SDGs. The student affairs division of DIU conducts numerous events engaging

students of all levels round the year to meet the challenges of SDGs and consequently, it increases environmental awareness of the students as a whole. The university adopts sustainable practices in all its development activities and initiatives. Apparently, DIU arranges a lot of events in collaboration with other partners in the area of sustainability and environmental wellbeing every year.

### 1.3. Dissemination of Achievements of SDGs

The Division of Research of DIU has developed and maintained a very informative and data-driven website namely Sustainability for Development (<https://sustainability4d.daffodilvarsity.edu.bd/>). The intention was to increase visibility of the university's efforts and contributions towards achievements of different sustainable development goals and recognize ourselves as an active partner of the United Nations communities.

With this sustainability for development website, DIU would like to share its initiatives, thoughts, outcomes, research findings, achievements, and lessons learnt from different projects implemented at DIU with the national and international communities and partners.

## 2. RESEARCH PROJECT AND OUTCOMES

Daffodil International University cultivates educational innovations, collaborations and knowledge sharing and conducts research for improvement of life of people and creating a sustainable environment for future generations.

### 2.1. Unmanned aerial systems-based assessment of tree cover and deforestation dynamics in Bangladesh

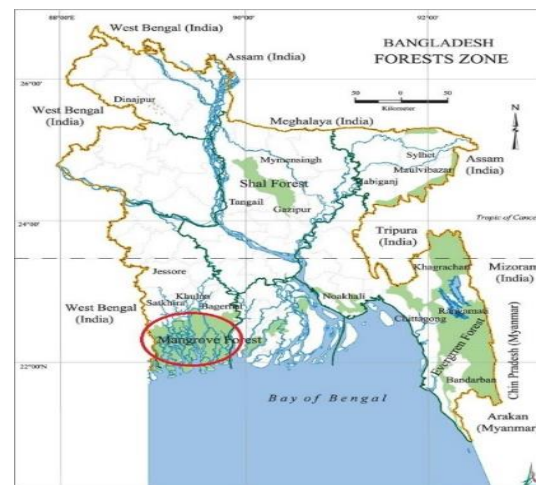
The project team was formed comprised with the Principal Investigator Dr. A.B.M Kamal Pasha of Daffodil International University and the U.S. Partner Demetrios Gatzolis for implementation within a duration of a four years from December 2017 - December 2021. Dr. Demetrios Gatzolis is a member of The United States Forest Service.

The main advantages of photogrammetry based on unmanned aerial vehicles (UAVs) compared to traditional aircraft imaging campaigns are low cost and flexibility. In addition, aircraft-based image acquisition usually requires months of planning and must cover a substantial area to justify the cost. UAVs can be deployed at a moment's notice and require practically no maintenance. They can also be deployed at easily customizable above-canopy altitude, camera orientation, trajectory, and speed. They are thus ideal for imaging small areas of forests, such as over individual tree stands,

management units or inventory plots (Gatziolis et al., 2015). Most developing countries do not yet have the capacity or knowledge base to support modern forest inventories and typically depend on satellite imagery and applications developed elsewhere to meet their needs, including the obligation to report on the status of their forests if they participate in the international REDD initiative. Satellite-based assessment is adequate in many instances—for example, to assess deforestation in the Amazon basin. It can be problematic and biased, however, when the anthropogenic interventions and ensuing disturbances are either gradual or have a spatial footprint much smaller than the resolution of the satellite imagery employed. The advent of novel, inexpensive technologies, including UAVs, and the development of affordable software capable of performing complex photogrammetric tasks hold promising potential into assisting the assessment of forest resources in developing countries and facilitating their verifiable participation in efforts to mitigate the effects of deforestation and forest degradation.



*Mangrove forests in the Sundarbans, Bangladesh.*



*Study area (red oval) in the Sundarbans forest of Bangladesh*

In this project, the PI and his team will devise and optimize a fully-automated UAV-based image acquisition protocol compatible with generating comprehensive (gap-free), high-density, precisely geo-referenced point clouds representing forest canopies for areas centered on selected locations in the Sal and Sundarbans forest types that host national forest inventory plots of the Bangladesh Forest Department (BFD). The researchers will generate canopy surface and canopy height rasters for each selected inventory plot and its surroundings, as well as estimates of canopy cover for each subplot of every selected inventory plot, and compare them to those obtained by inventory personnel during field visits. Using the data they will gather, they will develop forest type-specific models of forest biomass and outline a framework for forest change detection and quantification based on periodic satellite imagery and incorporating UAV-derived information over selected areas. Methodologies, findings, and results will be shared with the United Nations Food and Agriculture Organization,

representatives of the U.S. Government technical cooperative program SilvaCarbon in Bangladesh, BFD officials, and ultimately the public.

### **Project updates**

During January - March 2021 period, as planned, the PEER team resumed planning for the expedition to collect data in the Sundarbans. The plots were carefully selected to encompass all three saline zones of the Sundarbans' forest, and trip logistics were finalized with the help of USAID Bangladesh Mission. The expedition took place during the second half of February 2021. The team covered a wide range of different forest plots from Tambulbunia, Horintana, Shapla, Kokilmoni, Dubla, Harbaria, Jhapshi, Nondobala, Moraposhur and Hiron point forest range. The team observed unexpected findings in terms of tree composition and variation. After the expedition, the team moved on to raw data processing in partnership with Bangladesh Forest Department (BFD) with whom they now share data collection methods and hardware to conduct research.

In terms of outreach and collaboration, the project team continue their partnership with the Bangladesh Forest Department. The PEER team shared with BFD their data analysis methods and helped BFD develop and train their drone patrol team, which recently commissioned a new drone for patrolling the Sundarbans with technical advice by the PEER team. According to Dr. Pasha, this was a huge milestone for BFD and for the PEER team ever since the drone regulation law was passed in Bangladesh in 2020, following the team's year-long efforts for passing of such legislation. As part of the ongoing partnership, PEER team continues to rely on BFD's commitment to give PEER team access to BFD's central remote sensing lab where the team can access the needed data and conduct post-campaign data processing and analysis.

Bangladesh's very first policy for UAV operation for research purposes is in the pipeline. The draft for this historic legislation evolved around operational aspects of UAV use, which the PEER team highlighted in their permit acquisition documents. This is a significant milestone, considering the already complex approval processes in Bangladesh. Furthermore, technical feedback the team gave during the meeting to representatives of the intelligence community and air defense experts in attendance have cleared a lot of aspects of UAV usage for research that had not been addressed before. This breakthrough is anticipated to have opened a window of opportunity for conducting UAV based research in Bangladesh in the future.



Patrick Meyer (USAID/Bangladesh), Lisa Patel (USAID) and Lina Stankute-Alexander (NAS) visit PI Dr. Pasha at DIU, Bangladesh, November 2019



The team enters Mangrove forest in the Sundarbans. November 2019



Bangladesh Mission Director (MD) Derrick S. Brown and U.S. Ambassador Earl. R. Miller visit the Sundarbans site with the PEER



Drone launch in the Sundarbans. November 2019 NAS and USAID site visit

## 2.2. Pattern of COVID-19 Management and Prevention in Urban Bangladesh

The principal investigator of the project titled: Pattern of COVID-19 Management and Prevention in Urban Bangladesh is Professor Dr. Md. Shahjahan, Department of Public Health. The project is being implemented with the funding from Daffodil International University. The project overview is as following:

- The proposal focuses on the present COVID-19 pandemic situation and investigates a few key issues in Bangladesh context
- The results will have practical implications to deal with COVID-19 patients and management of the hospital at the present critical situation
- Four Scopus/ISI publications in high impact factor Journals may come out from this study
- The research team comprised the students and faculty members of the department of Public Health
- The study hopefully will open up future collaboration with the health sector of the Government and NGOs and create opportunities for future projects with funding.

## 2.3. DIU Solar Car



The “Yes You Can” team of 22 students of the Department of Computer Science and Engineering of Daffodil International University innovated the ‘Solar Car’. The young and talented students (‘Yes You Can’ Team) came up with an exceptional and outstanding project concept called "Solar Car" (7' long X 4' wide) for this green technology time of the earth. This is a complete and actual sized two seated solar car powered by the green technologies. This Car weight is 150 KG that could carry



two-three person's weight. It has 5 Solar panels with each 12 Volts in total 48 Volts with (50Watt x 4) + 80Watt = 280 Watt (in total); 4 pieces 12Watt Batteries in total 48Volts; one Solar Charge Controller; one high capacity Motor which 500rpm, 500Watt, 48Volts; one Motor Controller; along with associated parts and materials. In full charge state, this car is capable to run with two persons for 6 (six) hours at a time. The speed level of this car is 45km/hour. This car is fully solar car, charged from solar panel and need not any other supporting fuels. The future of this solar car is very prospective; it could reduce electricity consumptions where in most of districts in Bangladesh, lots of electricity motor vehicles are running on roads that used to charges from direct electricity connections. It also reduces the pressure of fuels and Gas used by different vehicles e.g. Oil, Mobil, Octane, Diesel, Petrol.

DIU Solar Car had received "Future Award" in the Asia's largest Solar technology event: ESVC - Electric Solar Vehicle Championship 2014-2015, organized by Imperial Society of Innovative Engineers (ISIE) which had been held at Maharishi Markandeshwar University (MMU) Haryana, India; in 2015. This project was jointly sponsored and funded by ICT Division, Government of the People's Republic of Bangladesh and Daffodil International University.

#### **2.4. Identification of Biological Effects of selected Mangroves Phytochemicals on Stressed animal Health**

The principal investigator of the project titled: Identification of Biological Effects of selected Mangroves Phytochemicals on Stressed animal Health is Ms. Farzana Islam Aovi, Lecturer, Department of Pharmacy of Daffodil International University. This project is being implemented with the funding from DIU.

Project update:

- The imported reagents have already been purchased for the project activity purpose
- The PI is looking for the appropriate diagnostic center to analyze the fish samples as this is new for all the diagnostic centers. She has contacted the University of Health Sciences, Bangladesh, Technical, Dhaka for assisting the analysis. They have agreed to analyze the sample as test basis.
- After getting their confirmation, the sample analysis for the project will be started.



## 2.5. Daffodil Agro Complex



Vehicle exhaust is a major source of anthropogenic carbon dioxide (CO<sub>2</sub>) and the main emission sources of air pollution in metropolitan cities of Bangladesh. Daffodil Eco-friendly Agro Support Centre was established targeting clean environment, conservation of nature, biodiversity, research, extension and development of different kinds of fruits, vegetables and medicinal plants by using inexpensive sandy fallow land. To support the efforts for a cleaner environment, most

of the fruit plants are broad leaved and evergreen which sink more CO<sub>2</sub> and release more O<sub>2</sub> for a consequently cleaner and healthier environment. Moreover, it also produces safe fruits and vegetables giving rise to the availability of nutritionally rich high value crops for fulfilling the nutritional food deficiency (hidden hunger) of poor and ultra-poor peoples. In spite of being the project area filled with sandy soil, DIU researchers have been successfully able to grow different types of fruits, vegetables and medicinal plants with acceptable amount of yields through organic farming systems. The centre also serves as a germplasm facility for education, research and training. The current activities include fruit saplings production and distribution, germplasm collection and conservation, and technical service to farmers.



This project is going to be popular at different strata of people for aesthetic value of fruit plants. It is an attractive place for the visitor from home and abroad which is enlightening the status of university too. However, we are going to establish an agro-tourisms centre where people can enjoy organic food and clean and healthy environment as a green space.

Daffodil Eco-friendly Agro Support Centre is an integral part of Department of Nutrition and Food Engineering (NFE) which has the mission to ensure quality of food from "Farm to Fork." This mission refers to the quality impact in our integrated food value chain. Without organic farming it is almost

impossible to maintain the high value food ensure to the society. Daffodil Agro complex is relentlessly working towards the pursuit of supplying organic food products in affordable price. This endeavor automatically contributes to the enhancement of green sustainability through organic farming system.

A germplasm is a collection of genetic resources for an organism and plants, the germplasm may be stored as a seed collection or, for trees, in a nursery. Daffodil Eco-friendly Agro Support Centre is established to make it one of the largest depository/germplasm centers of fruits, medicinal plants and agroforestry in Bangladesh. The mission of establishing a seed bank and extension of technologies among the farmers. Daffodil Eco-friendly Agro Support Centre will be extended to 15 acres of land very shortly (currently 5 acres).



## 2.6. Agro Textile Research Project

The textile based agro nets are successful to fight against insect attacks in the farmlands. This DIU funded research project is being implemented by Mr. Sanjib Kumar Talapatra, Student, (MSc) of Department of Textile Engineering, DIU under the supervision of Prof. Dr. Mahbubul Haque. Dr. Md. Ubaidullah Kaysar, Chief Scientific Officer, Regional Agriculture Research Center, Bangladesh Agricultural Research Institute (BARI) has also been involved in this research project.

Textile based agro nets can successfully prevent use of insecticides in the farmland which will ensure sustainability of the farmland as well. We were Right First Time (RFT) in selecting the agronet. After intense study we finalized the particulars of the intended net. Then the nets were arranged and used in the field and was found to be 100% okay. Accordingly both the time and the cost of the study were also minimized.



The use of textile based agro nets in brinjal cultivation



Without textile agro net, brinjal plant



Brinjal plant with textile agro net

## 2.7. Dengue fever prediction using machine learning and Deep Learning prior to clinical trials: A case study in Bangladesh

The project is funded by DIU and is being implemented by Dr. Md Aktaruzzaman (Associate Professor, Department of CSE) & Director, BLC as the principal investigator in collaboration with Dr. Shaikh Muhammad Allayear, Head of MCT and a local public university and a foreign university. Besides, a group of five undergraduate students of CSE have been working for this project.

The project is crucial for investigation in the present critical situation of Dengue fever in the country. The research team will develop a mobile application for detection of dengue fever prior to clinical investigation. The data collected for this study will be stored in the Department of Computer Science and Engineering. The research team will work in the CSE lab. After completion, the project will come out with at least two Scopus/ISI publications.

## 2.8. Social stigma related to prevention and treatment of Covid-19: A contemporary public health challenge

The project titled: "Social stigma related to prevention and treatment of Covid-19: A contemporary public health challenge" is an externally funded project received from the Bangladesh Medical Research Council (BMRC) by Prof. Dr. Md. Shahjahan, Department of Public Health, DIU. The purpose of this study is to identify direct and indirect social stigma associated with preparedness of post pandemic Covid -19 about discrimination, fear, acceptance and self-efficacy among community leaders, media personnel (both electronic & print) and healthcare providers at the community level.

Specific objectives:

- To determine socio-demographic characteristics of the respondents

- To examine direct social stigma like the discrimination, misconception, fear, acceptance and self-esteem among the study subjects.
- To identify indirect social stigma like unnecessary hospitalization, media rumor, stereotypes, hiding illness and discourage from adopting healthy behavior.
- To investigate the relationship between social stigma and psycho-behavioral related variables associated with it.
- To find out if there is any association between smart social stigma and socio-demographic variables.
- To assess the risk of social stigma and discrimination to change or prevent dangerous behaviors and attitudes.

## **2.9. Development and standardization of process for value added beet root products commercialization (Funded by BANBEIS)**

Funded by the BANBEIS, Ministry of Education, GoB, this project is being led by Professor Dr. Md. Bellal Hossain, Associate Dean, Faculty of Allied Health Science, DIU. This project is related to the theme of SDG 2: No hunger.

The objectives of the project are:

- i. Beet roots availability in Bangladesh assessed;
- ii. Proximate composition of the locally cultivated beet roots analyzed;
- iii. Different products (jam, jelly, preserves, pickles, candies, chips, dehydrated beet roots, colorants, functional beverages etc.) from the beet roots developed;
- iv. Composition and shelf-life of the products assessed;
- v. Sensory evaluation (taste panel evaluation) of the developed products conducted.

## **2.10. Ethiopian Energy Stakeholder Capacity Development on Energy Modelling for Policy Planning**

This is an externally funded project, received from the International Food Policy Research Institute (IFPRI), USA. The Principal Researcher of the project is Dr. Md. Alam Hossain Mondal, Associate Professor, Dept. of EEE and Co-Researcher Md. Dara Abdus Satter, Associate Professor, Dept. of EEE. The theme of the project is very much related the SDG 7: Affordable and clean energy.

This project emphasizes on the identification of participants to create a core energy modelling team from relevant organizations such as MOWIE, Ethiopian Electric Power Company, Ethiopian Electric Utility and its Universal Electricity Access Program, Ethiopian Electric Agency, the Power Africa

initiative in Ethiopia, World Bank's Ethiopia Electrification Program and academic institutions. During this project a good number of workshop/meeting/training will be arranged to develop an energy planning for the core team. The ultimate goal of the project is the identification of data gaps, data gathering and management for the TIMES (The Integrated MARKAL/EFOM System) model development for the electricity sector and co-development of a basic Ethiopia-TIMES model. Development of a data collection and management system for TIMES that includes the following key sectors: agriculture, households, industry, commercial, transport and others and development of a complete energy system. Work with the core team to develop alternative policy scenarios such as NDCs, energy efficiency/improve cook stoves, universal electrification, energy trading/export to the neighbouring countries and promotion of renewable energy technologies and develop at least one research paper and one policy note.

### **2.11. Natural Water Conservation and Restoration Using Aquatic Macrophytes**

Due to the industrialization, our water bodies such as rivers, lakes, ponds and wetlands of Dhaka are being polluted by the discharge of toxic chemicals and harmful substances which degrades the water quality and it creates back to back harmful impacts on humans and also the aquatic ecosystem. To improve water quality in a natural we need to think any possible solution related with biological method. In this regard a submerged macrophyte was used to reduce the level of pollutants and contaminants from the natural fresh water.

#### **Objective:**

- To find the concentration level of heavy metals
- To improve the water quality by our native aquatic plants
- To observe the efficiency of our native aquatic plants on the wastewater.
- To detoxify the water in a naturally occurred manner through aquatic plants
- To implement this cost effective way for the treatment of our polluted water body.

**Methodology:** This research has systematic procedures to follow. The overall process is being illustrated below:



**Fig. 1.** Natural water quality improvement via aquatic plants in laboratory.

#### Research Outcome:

- The treatment has successfully changed the water quality
- It's a plant based treatment, so the oxygen is increased and creates a healthy environment for aquatic organisms
- Huge changes have been identified in water color and its odor.
- A huge percentage of reduction of heavy metals and other toxic chemicals.
- This research will assure the plausible sound life for aquatic organisms.

### 2.12. Project on Mobile Monitoring Station of Solar Home System (SHS)

The German Academic Exchange Service (DAAD), Germany has funded this project which is being implemented by the Principal Researcher: Professor Dr. M. Shamsul Alam, Dean, Faculty of Engineering, DIU and Co-Researchers: Dr. Md. Alam Hossain Mondal, Associate Professor, Dept. of EEE; Tasmia Baten, Senior Lecturer, Dept. of EEE and Nusrat Chowdhury, Lecturer, Dept. of EEE. This project is also within the theme of SDG 7.

This project describes measurement and evaluation of three PV solar panels and an attempt has been taken to fix standardization for solar PV systems to accelerate implementation of efficient, sustainable and reliable solar electrification project in Bangladesh. DAAD provided some advance performance measurement meters and loggers that are capable for measuring system voltage, current, power, efficiency, and solar irradiance along with the other weather parameters. The research grant facilitated the purchase of the equipment for Electrical and Electronics Engineering Department, Daffodil International University (DIU). The project is located at Daffodil International University, administrative building rooftop, Dhaka, Bangladesh. Dhaka is situated 23°42' North latitude and 90°24' East longitudes means 12-13 hours/day sunshine is available in average. Three

capacities with 45W, 60W, 100W DC solar PV systems and a 1 kW on-grid system have been installed on the roof of the university building for performance testing. All systems are oriented to the south with a tilt angle of 23°. This project has been emphasized on stand-alone systems for standardization that are mostly using for off-grid electrification in Bangladesh. It proposes a base study of solar energy potentiality precisely focusing on Dhaka division. This research activity facilitates to assess the technical and economic feasibility to get the efficient solar system as well as confirms the standard (proper or below standard) of the solar system. The energy generation by PV modules were measured with solar analyser, whereas the solar irradiation was captured by radiation sensor mounted with the analyser. The data of the real-time power were displayed and stored in the equipment. All the experimental data were measured and recorded for whole day throughout the year.

### 2.13. DIU Blended Learning Center

Daffodil International University (DIU) developed and initiated the Blended Learning Center (BLC) online platform to ensure uninterrupted education since emergence of COVID-19 pandemic. Blended Learning Center is the digital teaching and learning hub of Daffodil International University. The platform aims to connect teachers and students effectively allowing teachers to track progress of individual students and better facilitate their learning.

This was very innovative and effective in a sense that while all other universities in Bangladesh totally postponed their academic and administrative activities during the COVID-19 pandemic, only Daffodil International University, with its pre-readiness through the OSOL project and implementation of BLC platform could ensure full educational activities virtually. Students also get essential IT training and training on BLC platform to enable them to utilize the laptop both in physical and virtual classes and for outsourcing purposes to supplement their expenses.

Link: <https://elearn.daffodilvarsity.edu.bd/?redirect=0>

Students and Teachers can get guidelines on the Blended Learning Center platform from the website. Teachers can get the Content Guidelines and support from this BLC platform. The DIU BLC apps is available at Google play store from where students and teachers can easily download it and can get access from elsewhere of the world. Student Experience Sharing about DIU Blended Learning Center (BLC): <https://www.youtube.com/watch?v=obrixnoRuO8>

### 2.14. Free Laptop Distribution under One Student One Laptop Project

DIU perceived that the BLC virtual platform could not be effective without ensuring computer devices for all the students. To solve the problem, DIU initiated an innovative the project “One Student One Laptop” (OSOL) to provide free laptops to every student and ensure uninterrupted education and soft skills development and employability of students. The students could continue their virtual classes by using that free laptop during COVID-19 pandemic which ensured uninterrupted teaching-learning at DIU.

Web link: <https://laptop.daffodilvarsity.edu.bd/>

Video Link: <https://www.youtube.com/watch?v=cNijEoO6SPQ>

News link: <https://www.risingbd.com/english/campus/news/75492>

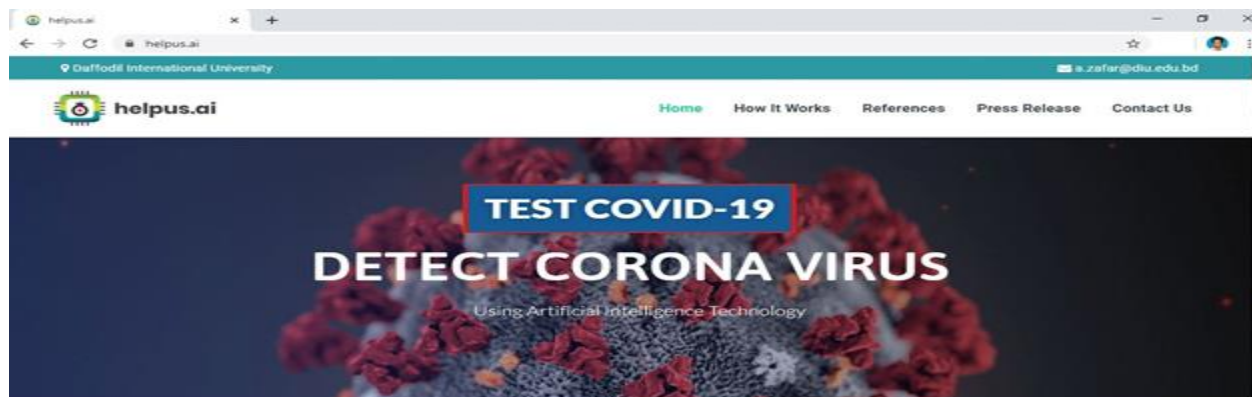
<https://www.newagebd.net/article/122319/diu-distributes-laptops-among-3000-students>

## 2.15. Support for Clean Energy Scale Up and Investment in Bangladesh

The project on Support for Clean Energy Scale Up and Investment in Bangladesh is being implemented with the funding from the National Renewable Energy Laboratory (NREL), USA and United States Agency for International Development (USAID), USA. The Principal Researcher of the project is Dr. Md. Alam Hossain Mondal, Associate Professor, Dept. of EEE and Co-Researchers are: Md. Dara Abdus Satter, Associate Professor, Dept. of EEE and Dr. Md. Rezwanaul Ahsan, Assistant Professor, Dept. of EEE.

As part of the USAID-NREL Bangladesh second phase work, NREL will build on the results of the wind resource assessment completed in June 2018 and continue to provide technical support to the GOB to meet development goals and renewable energy targets, promote public and private sector investment, in clean energy and strengthen the capacity of relevant GOB officials and private sector stakeholders to facilitate data driven decision making.

## 2.16. The beta version of AI solution to detect and track 'COVID-19'



As part of its social responsibility, a team of researchers from Department of Public Health, Artificial Intelligence (AI) Unit of Daffodil International University (DIU) along with Cardio-Care General and Specialized Hospital has developed a new diagnostic modality to detect COVID-19 where the researchers are using AI software to detect Covid-19 by analyzing the chest X-ray or images from lung CT scans. By using this AI technology, the health workers/Doctors can instantly diagnose if the suspected person has COVID-19 or not. Currently, this AI technology can differentiate between COVID 19 and other respiratory diseases including Pneumonia. Doctors can then follow up with other examinations and lab tests to confirm a diagnosis of the disease. In this research, researchers found that the sensitivity of this AI modality for COVID-19 infection is 96%. This is a question-answer based tool which gives a prediction about COVID\_19 through this software.

Any MBBS doctor with his/her BMDC Registration number can use the software free of cost to detect COVID-19 through x-ray image of patient's chest. This tool can be used through this website [www.helpus.ai](http://www.helpus.ai). Beside this, the software can play a vital role in forecasting COVID\_19 symptoms at an early stage. It may mention that Daffodil International University also developed another software by using artificial intelligence, which can detect COVID-19 through x-ray image of patient's chest.



### 3. PUBLICATIONS

As stated earlier, DIU cultivates sustainable development mindset among the faculty and the students and integrates several sustainable development goals related courses which encourages our faculty member to conduct research into certain development areas and publish papers in quality journals and conferences jointly with the local and foreign university faculty members. A list of such publications are given below.

SL	Title	First Author	Co-Authors	Publication Source
1.	SOT: An Application-based Research for Translate Natural Language from Image	Masud Rabbani	Ali Md Musfick Jamil Md Ishrak Islam Zarif Thaharim Khan	Advances in Electrical and Computer Technologies
2.	Effect of storage conditions on rancidity and antioxidant activity of gac oil compared with healthy oils		Tania Alam	Agriculture and Natural Resources
3.	An overtime production inventory model for deteriorating items with nonlinear price and stock dependent demand	Mohammad Abdul Halim		Alexandria Engineering Journal
4.	Hybrid price and stock dependent inventory model for perishable goods with advance payment related discount facilities under preservation technology		Mohammad Abdul Halim	Alexandria Engineering Journal
5.	Machine learning to reveal an astute risk predictive framework for Gynecologic Cancer and its impact on women psychology: Bangladeshi perspective		Hasin Rehana Md. Raihan Ahmed Touhid Bhuiyan	BMC Bioinformatics
6.	Development of score based smart risk prediction tool for detection of type-1 diabetes: A bioinformatics and machine learning approach	Fuyad Al Masud	Bikash Kumar Paul	Biointerface Research in Applied Chemistry
7.	Ovarian cancer substantial risk factor analysis by machine learning: A low incoming country perspective	Md. Raihan Ahmed	Hasin Rehana	Biointerface Research in Applied Chemistry

8.	Regulatory gene network pathway among brain cancer and associated disease: A computational analysis		Hasin Rehana	Biointerface Research in Applied Chemistry
9.	Smart risk prediction tools of appendicitis patients: A machine learning approach	Fuyad Al Masud	Bikash Kumar Paul Md. Mizanur Hasan Khan Sajal Md. Rejaul Islam Royel	Biointerface Research in Applied Chemistry
10.	Development of an advanced DNA biosensor for pathogenic <i>Vibrio cholerae</i> detection in real sample		Md. Mahbubur Rahman	Biosensors and Bioelectronics
11.	Identification of biomarkers and pathways for the SARS-CoV-2 infections that make complexities in pulmonary arterial hypertension patients	Tasnimul Alam Taz	Bikash Kumar Paul S. M. Hasan Mahmud	Briefings in Bioinformatics
12.	Network-based identification genetic effect of SARS-CoV-2 infections to Idiopathic pulmonary fibrosis (IPF) patients	Tasnimul Alam Taz	Bikash Kumar Paul Md Kawsar S. M. Hasan Mahmud	Briefings in Bioinformatics
13.	End users' resistance behaviour paradigm in pre-deployment stage of ERP systems: evidence from Bangladeshi manufacturing industry		Imran Mahmud	Business Process Management Journal
14.	Physicochemical, Sensory and Microbial Assessment of Newly Formulated and Fortified Yogurt	Nasima Akter Mukta	A. K. M. Sarwar Inam Ahmad Ismail Mustafa Moinul Hasan	Carpathian Journal of Food Science and Technology
15.	Weather status prediction of Dhaka City using machine learning	Sadia Jamal	AKM Shahariar Azad Rabby Roushanara Pervin Tanvir Hossen Bappy	Computational Methods and Data Engineering. Advances in Intelligent Systems and Computing
16.	Smart Residence Incorporating with Internet of Things (IoT)	Mst. Eshita Khatun	Debashish Kumer Shingho Md. Saddam Hossain	Computer Networks and Inventive Communication Technologies
17.	Heart disease prediction using supervised machine learning	Md Mamun Ali	Bikash Kumar Paul	Computers in Biology and Medicine

	algorithms: Performance analysis and comparison			
18.	Impact of social responsibility disclosure between implementation of green accounting and sustainable development: A study on heavily polluting companies in Bangladesh	Bablu Kumar Dhar		Corporate Social Responsibility and Environmental Management
19.	Increasing the potentiality of graphene oxide by chloroacetic acid for the adsorption of lead with molecular dynamic interpretation		Farzana Rahman	Current Research in Green and Sustainable Chemistry
20.	Hutchinson-Gilford Progeria Syndrome: An Overview of the Molecular Mechanism, Pathophysiology and Therapeutic Approach	Md. Mominur Rahman	Kazi Sayma Ferdous Md. Robin Khan Mohammad Touhidul Islam Muniruddin Ahmed	Current gene therapy
21.	Quantity and quality of condensate air conditioner water for potential use in drinking purpose	Md. Masud Alom		Desalination and Water Treatment
22.	Promoting student-centred blended learning in higher education: A model	Md. Kabirul Islam	Md. Fouad Hossain Sarker	E-Learning and Digital Media
23.	Solar or Diesel: A Comparison of Costs for Groundwater-Fed Irrigation in Sub-Saharan Africa Under Two Energy Solutions		Md. Alam Hossain Mondal	Earth's Future
24.	An international environmental court and the international legalism: An overview from legal context	Kudrat-E-Khuda (Babu)		Ecology, Environment and Conservation Paper
25.	Intellectual property theft protection in iot based precision agriculture using sdn	Md. Selim Hossain		Electronics (Switzerland)
26.	Mono camera-based optical vehicular communication for an advanced driver assistance system		Israt Jahan	Electronics (Switzerland)
27.	Energy challenges for a clean environment: Bangladesh's experience		Md. Alam Hossain Mondal	Energy Reports

28.	Heavy metals contamination of river water and sediments in the mangrove forest ecosystems in Bangladesh: A consequence of oil spill incident		Nizam Uddin	Environmental Nanotechnology, Monitoring & Management
29.	Role of pyroptosis in diabetic retinopathy and its therapeutic implications		Anjuman Ara Mimi	European Journal of Pharmacology
30.	Clinical Characteristics and Diagnostic Challenges of COVID-19: An Update From the Global Perspective		Selina Akhter	Frontiers in Public Health
31.	Web-Based Electricity Cost Modeling for Bangladesh Power Sector to Improve Capacity and Transparency	M. Shamsul Alam	Alam Hossain Mondal	Future Technologies Conference (FTC) 2020
32.	A bioinformatics approach for identification of the core ontologies and signature genes of pulmonary disease and associated disease	Hasin Rehana	Md. Raihan Ahmed	Gene Reports
33.	Prevalence and factors associated with depression among the mothers of school-going children in Dhaka city, Bangladesh: A multi stage sampling-based study	Sharmin Sultana	ABM Alauddin Chowdhury Kazi Rumana Ahmed Md. Imdadul Haque Md. Kamrul Hossain Sanjana Zaman	Heliyon
34.	Deviance from the ethical standard of reporting child sexual abuse in daily newspapers of Bangladesh		Md. Golam Rahman	Humanities and Social Sciences Communications
35.	A Frequency and Voltage Stability Based Load Shedding Technique for Low Inertia Power Systems		Seema Rani Modak	IEEE Access
36.	Efficient prediction of cardiovascular disease using machine learning algorithms with relief and lasso feature selection techniques	Pronab Ghosh		IEEE Access

37.	Electric Energy Meter System Integrated with Machine Learning and Conducted by Artificial Intelligence of Things-AIoT	Nimai Chandra Das	Md Sazzad Sarkar	IEEE Conference of Russian Young Researchers in Electrical and Electronic Engineering (ElConRus)
38.	LFNNR: Light Follower Neural Network Robot Conducted by Machine Learning Technique	Md Ziaul Haque Zim	Md Ziaul Haque Zim Md Sazzad Sarkar Md. Ashiqul Islam Puza Rani Sarkar Shakib Salim Tonmoy Tania Khatun	IEEE Conference of Russian Young Researchers in Electrical and Electronic Engineering (ElConRus)
39.	The Impact of Corona Pandemic on the E-Commerce Industry Using Data Mining	Faria Nishat Khan	Abdus Sattar Syed Rakesh Uddin Yeasin Arafat Shampod	International Conference on Computing Methodologies and Communication (ICCMC)
40.	A study on dengue fever in bangladesh: Predicting the probability of dengue infection with external behavior with machine learning	Md. Sanzidul Islam	AKM Shahariar Azad Rabby Sharun Akter Khushbu Touhid Bhuiyan	5th International Conference on Intelligent Computing and Control Systems
41.	Machine vision based potato species recognition	Md Nuruzzaman	Ahete Shamul Haque Chowdhury Shoumik Md. Abbas Ali Khan Md. Mostafijur Rahman Md. Shahadat Hossain Md. Tarek Habib	5th International Conference on Intelligent Computing and Control Systems
42.	ONGULANKO: An IoT based biometric attendance logger	Fahim Faisal	Abdus Sattar	5th International Conference on Intelligent Computing and Control Systems
43.	A data science approach to Predict the University Students at risk of semester dropout: Bangladeshi University Perspective		Abir Mahamud Rabbi Rasel Ahammad	5th International Conference on Trends in Electronics and Informatics

44.	Improvement of elastic property of circular weft knit three-thread fleece fabric by changing stitch length		Abu Naser MD. Ahsanul Haque	AATCC Journal of Research
45.	PERCEPTION TOWARDS THE ONLINE CLASSES: A STUDY ON THE TERTIARY LEVEL STUDENTS OF BANGLADESH	Md. Rayhanul Islam	Nusrat Nargis Sayma Suraiya Shahana Kabir Siddiquir Rahman	Academy of Entrepreneurship Journal
46.	AN EMPIRICAL STUDY ON THE FACTORS AFFECTING ORGANIC FOOD PURCHASING BEHAVIOR IN BANGLADESH: ANALYZING A FEW FACTORS	Shanjida Chowdhury	Nurul Mohammad Zayed	Academy of Strategic Management Journal
47.	An empirical analysis on the formation of modern structure of the national economy using digital technology		Nurul Mohammad Zayed	Academy of Strategic Management Journal
48.	Approaches To Evaluation Of The Agriculture Competitiveness Level: Empirical Evidence In Ukraine		Nurul Mohammad Zayed	Academy of Strategic Management Journal
49.	Assessment Of Phosagro's Capital Structure Based At Two Hierarchical Methods Of Integral Ranking Of Important Financial And Economic Activity Indicators		Nurul Mohammad Zayed	Academy of Strategic Management Journal
50.	Covid-19: After Effects Of Coronavirus And Its Impact On Global Economy		Nurul Mohammad Zayed	Academy of Strategic Management Journal
51.	Economic performance evaluation of the tourism resources of the republic of Azerbaijan		Nurul Mohammad Zayed	Academy of Strategic Management Journal
52.	Emerging Strategies and Economic impact of Covid-19: A case study of Gulf Cooperation Council Countries (GCC)		Nurul Mohammad Zayed Tahsin Sharmila Raisa	Academy of Strategic Management Journal
53.	Empirical Analysis Of The Role Of Patriotic Education On Common Strategic- National And Economic Policy In The Modern World: A Case Study Of Russia		Nurul Mohammad Zayed	Academy of Strategic Management Journal

54.	Factors influencing the rapid growth of online shopping during covid-19 pandemic time in Dhaka City, Bangladesh	Dewan Golam Yazdani Showrav	Anuz Kumar Chakrabarty Md. Arif Hassan Sayedul Anam	Academy of Strategic Management Journal
55.	IMPACT OF LEVERAGE RATIOS ON INDICATORS OF FINANCIAL PERFORMANCE: EVIDENCE FROM BAHRAIN		Nurul Mohammad Zayed	Academy of Strategic Management Journal
56.	Interregional Migration: Economic Aspects and Foreign Experience of Public Regulation		Nurul Mohammad Zayed	Academy of Strategic Management Journal
57.	Problems And Prospects Of Railway Passenger Transport Development In Kazakhstan		Nurul Mohammad Zayed	Academy of Strategic Management Journal
58.	State And Development Of Integration Cooperation Between Kazakhstan And Foreign Countries: Trade, Economic, And Investment Aspects		Nurul Mohammad Zayed	Academy of Strategic Management Journal
59.	Strategic Analysis on The Transformational Processes of Educational Services Funding: A Managerial And Economic Perspective from The International Scientific Research Cooperation		Nurul Mohammad Zayed	Academy of Strategic Management Journal
60.	The Relationship Of Science And Personnel Policy Development In The Problem Field Of The Digital Economy		Nurul Mohammad Zayed	Academy of Strategic Management Journal
61.	Cyber Security in the Global Village and Challenges for Bangladesh: An Overview on Legal Context	Kudrat-E-Khuda (Babu)		Advanced Sciences and Technologies for Security Applications
62.	IoT-Based Air Pollution Controlling System for Garments Industry: Bangladesh Perspective	Marzan Tasnim Oyshi	Moushumi Zaman Bonny	Advances in Distributed Computing and Machine Learning conference
63.	A Comparative Study on Prediction of Dengue Fever Using Machine Learning Algorithm	Saif Mahmud Khan Dourjoy	Abu Mohammed Golam Rabbani Rafi Mohd. Saifuzzaman Zerin Nasrin Tumpa	Advances in Distributed Computing and Machine Learning. Lecture Notes in Networks and Systems

64.	IoT Security Issues and Possible Solution Using Blockchain Technology	Marzan Tasnim Oyshi	Moushumi Zaman Bonny Zerin Nasrin Tumpa	Advances in Distributed Computing and Machine Learning.
65.	Significant pathway and biomarker identification of pancreatic cancer associated lung cancer	Tamanna Khan	Bikash Kumar Paul Md. Kabirul Islam Md. Rakib Islam Md. Tanvir Hasan	Informatics in Medicine Unlocked
66.	Policy Discourses: Shifting the Burden of Healthcare from the State to the Market in the Kingdom of Saudi Arabia	Redwanur Rahman		Inquiry (United States)
67.	Modelling end users' continuance intention to use information systems in academic settings: Expectation-confirmation and stress perspective	Mohamed Emran Hossain	Imran Mahmud	Interdisciplinary Journal of Information, Knowledge, and Management
68.	Internet of Things (IoT) based ECG System for Rural Health Care		Marzia Ahmed	International Journal of Advanced Computer Science and Applications
69.	Predicting the Appropriate Mode of Childbirth using Machine Learning Algorithm		Md. Abdur-Rakib Md. Shameem Alam Nusrat Jahan Prottasha	International Journal of Advanced Computer Science and Applications
70.	Recognizing Human Emotions from Eyes and Surrounding Features: A Deep Learning Approach	Md. Nymur Rahman Shuvo	Md. Ashiqul Islam Muhammad Shamsajaman Shazid Hasan Tania Khatun	International Journal of Advanced Computer Science and Applications



71.	An Automated Convolutional Neural Network Based Approach for Paddy Leaf Disease Detection	Md. Ashiqul Islam	Md Nymur Rahman Shuvo Muhammad Shamsojjaman Shahadat Hossain Shazid Hasan Tania Khatun	International Journal of Advanced Computer Science and Applications
72.	Prediction of addiction to drugs and alcohol using machine learning: A case study on Bangladeshi population	Md. Ariful Islam Arif	Farah Sharmin Md. Sadekur Rahman Md. Tarek Habib Saiful Islam Sany	International Journal of Electrical and Computer Engineering
73.	Expert cancer model using supervised algorithms with a LASSO selection approach	Pronab Ghosh	Mohd. Saifuzzaman Saima Afrin Syeda Tanjila Atik	International Journal of Electrical and Computer Engineering
74.	Design of microstrip patch antenna to deploy unmanned aerial vehicle as UE in 5G wireless network		Elias Hossain	International Journal of Electrical and Computer Engineering
75.	Assessment of the concentration levels of heavy and trace elements in fish using Proton-Induced Gamma Emission		Sanjida Sultana Reya	International Journal of Environmental Analytical Chemistry
76.	Civic engagement through restaurant review page in Facebook: a structural equation modelling approach		Rozina Akter	International Journal of Ethics and Systems
77.	The effects of board size and board composition on CSR disclosure: a study of banking sectors in Bangladesh	Md. Abdur Rouf	Md. Alamgir Hossain	International Journal of Ethics and Systems
78.	Predictors of parental knowledge of tobacco effects on health and parental perceptions on tobacco control measures at household level in selected urban residential areas of Dhaka city, Bangladesh	Md. Imdadul Haque	Md. Golam Dostogir Harun	International Journal of Health Promotion and Education

79.	Reviewing the Global Smartphone Industry Strategic Implication in Response to COVID-19 Situation	Samsul Alam		International Journal of Interactive Mobile Technologies
80.	A new experimental study on fly ash, lime and dredged sediment mixed block as an alternative eco-friendly building materials		Mahbubur Rahman	International Journal of Masonry Research and Innovation
81.	Drug Addiction and Substance Use Among the Dalit Married Adolescent Girls in Bangladesh: a Cross-Sectional Survey	Md. Imdadul Haque	ABM Alauddin Chowdhury Abu Naser Zafar Ullah Md. Golam Dostogir Harun Tasnim Akter Varoti Rani	International Journal of Mental Health and Addiction
82.	A Review of CZTS Thin Film Solar Cell Technology	Md. Fakhrul Islam		Journal of Advanced Research in Fluid Mechanics and Thermal Sciences
83.	Electronic Waste in Bangladesh: Its present statutes, and negative impacts on environment and human health	Kudrat-E-Khuda (Babu)		Pollution
84.	Environmental pollution by brick kiln in bangladesh: An analysis of the existing legal framework		Kudrat-E-Khuda (Babu) MORIOM AKTER MOU	Pollution Research
85.	Marine pollution in bangladesh: Its causes and impacts on the environment	Kudrat-E-Khuda (Babu)		Pollution Research

#### 4. CURRICULUM TO SUPPORT SDGS

Daffodil International University has been providing higher education to the youths especially the rural citizens of Bangladesh who come from low income families. DIU has several programs that are related to sustainability and which work for the implementation of the sustainable development goals of the United Nations.

Daffodil International University since its inception in 2002, has been striving to introduce timely and demanding courses along with state of the art facilities for the students to be able to acquire skills and qualities to enter the national and international job markets. Hence, each year latest courses are

introduced along with the new Departments to meet the rising demands of the industry. An overview of SDG related courses as per different disciplines are stated in the following section.

#### 4.1. Sustainability Related Academic Courses in Different Disciplines

Courses related to environment and sustainability		
Sl.	Name of the Course	Department
1.	Introduction to Environmental Science and Disaster Management	<b>Environmental Science and Management Disaster</b>
2.	Geography and Environment	
3.	Environmental Biology	
4.	Environmental Biology lab	
5.	Soil and Environment	
6.	Environmental Economics	
7.	Bangladesh : Physical Environment	
8.	Fundamentals of Ecology	
9.	Introduction to Geographic Information System	
10.	Introduction to Geographic Information System Lab	
11.	Environmental Engineering	
12.	Environmental Chemistry	
13.	Environmental Chemistry with Lab	
14.	Environmental Resource Management	
15.	Statistics for Environmental Sciences	
16.	Forest and Wildlife Management	
17.	Environmental Hazard and Disaster Management	
18.	Fundamentals of Earth Sciences	
19.	Remote Sensing and GIS	
20.	Remote Sensing and GIS Lab	
21.	Fundamentals of Hydrosphere	

22.	Climatic Disaster Management	
23.	Environmental Pollution and Management	
24.	Database System Concepts	
25.	Database System Concepts Lab	
26.	Water Resources Planning & Management	
27.	Coastal & Marine Environmental Management	
28.	Biodiversity Conservation	
29.	Remote Sensing for Resource Appraisal	
30.	Remote Sensing for Resource Appraisal Lab	
31.	Urban Environmental Issues & Planning	
32.	Environmental Impact Assessment	
33.	Environmental Monitoring and Auditing	
34.	Research Method (Project Design)	
35.	Urban Waste and Effluent Management	
36.	Environmental Modeling	
37.	Seminar (Pre-approved Topic)	
38.	Public Health and Environment	
39.	Gender and Environment	
40.	Environmental Laws and Ethics	
41.	Instrumental Methods for Environmental Analysis	
42.	Landscape Simulation and Perception	
43.	Project and Seminar	
44.	Development Theories, Strategies and Issues	<b>Development Studies</b>
45.	Poverty Alleviation and Development	
46.	Gender and Development	
47.	Governance and Development	

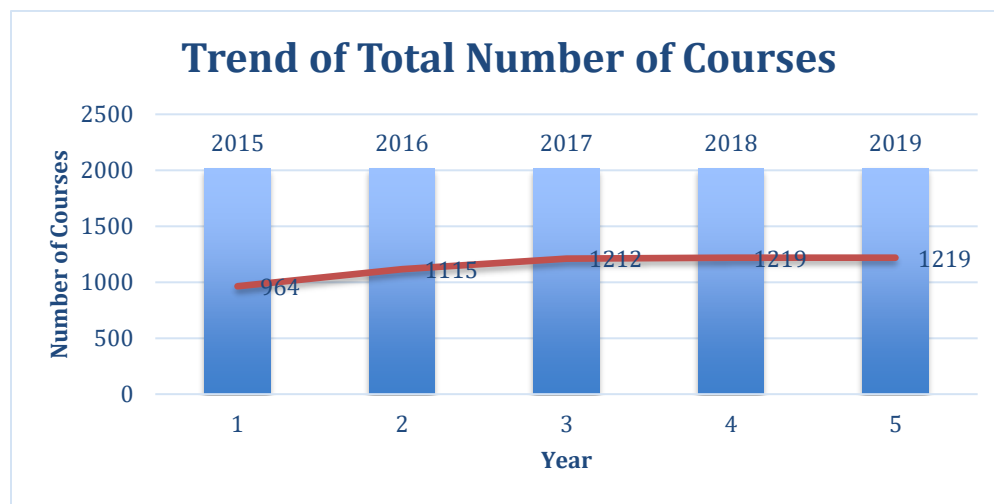
48.	Sustainable Development		
49.	Research Methodology		
50.	Basic Statistics for Development		
51.	Project Management		
52.	Natural Resource Management		
53.	Development Evaluation and Management		
54.	Rural Development		
55.	Introduction to Food Science and Technology		<b>Nutrition and Food Engineering</b>
56.	Physical, Inorganic and Analytic Chemistry		
57.	Methods for Nutritional Status		
58.	Statistics and Probabilities		
59.	Dietetics		
60.	Food Microbiology		
61.	Fruits and Vegetable Technology		
62.	Clinical Nutrition		
63.	Nutrition in Health and Disease		
64.	Water and Beverage Technology		
65.	Nutritional Planning		
66.	Environmental Food Technology		
67.	Food Preservation and Engineering		
68.	Sensory Evaluation		
69.	Food Storage Engineering		
70.	Organic Pharmacy	<b>Pharmacy</b>	
71.	Biochemistry and Molecular Biology		
72.	Bangladesh Studies		

73.	Statistics and Probability	<b>Computer Science &amp; Engineering</b>
74.	Art of Effective Living	
75.	Project Management	<b>Multimedia and Creative Technology</b>
76.	Business Statistics	<b>Business Administration</b>
77.	Organizational Behavior	
78.	Legal Environment in Business	
79.	Entrepreneurship Development	
80.	Research Methodology	
81.	Bangladesh Studies: Socio-Economic Perspective	
82.	Art of Living	
83.	Environmental Science and Business Management	
84.	Economic Geography	
85.	Projects Appraisals and Management	
86.	Agricultural Marketing	
87.	Disaster Management	
88.	Entrepreneurship	
89.	Art of Living	<b>Real Estate</b>
90.	Environmental Issues in Real Estate	
91.	Geographical Information System in Real Estate	
92.	Urban Land Use and Development	
93.	Urbanization & Regional Development	
94.	Research Project in Real Estate	
95.	Sustainable Land Use Planning and Management	
96.	Public Land and Natural Resources Laws	

97.	Geographical Information System	<b>Tourism and Hospitality Management</b>
98.	Entrepreneurship	
99.	Sustainable Tourism	
100.	Tourism Impact and Sustainability	
101.	Bangladesh: Land and Culture	<b>Journalism and Mass Communication</b>
102.	Art of Living	
103.	Communication Research Methodology	
104.	Statistics for Social Research	
105.	Health and Population Communication	
106.	Legal Research Methodology	<b>Law</b>
107.	Art of Living	
108.	Environmental Law	
109.	Renewable Energy Technology	Electronics & Telecommunication Engineering
110.	Radar and Navigation	
111.	Statistics and Probability	
112.	Environmental Mgt. in Textile & Allied Industries	Textile Engineering
113.	Climate Responsive Architecture	<b>Architecture</b>
114.	Ecology	
115.	Green Architecture and Sustainable Development	
116.	Luminous Environment in Architecture	
117.	Water Management in Buildings	
118.	Sustainable Architecture	
119.	Sonic Environment in Architecture	
120.	Environmental Design and Disaster Studies	
121.	Architectural & Urban Conservation	
122.	Research Method	
123.	Geology and Earthquake Engineering	<b>Civil Engineering</b>
124.	Environmental Engineering	
125.	Environmental Engineering Lab	

126.	Water Resource Engineering	
127.	Water Resource Engineering Lab	
128.	Climate Change and Sustainable Development	
129.	Biostatistics	<b>Public Health</b>
130.	Research Methodology	
131.	Occupational and Environment Health	
132.	Environment Health Toxicology	
133.	environmental policies, strategies, Regulation and occupational Environmental & Disease	

The following graph indicates an increase of number of courses introduced in the recent years.



Trend of total number of courses offered in 2015-2019 (Daffodil International University, Bangladesh)

## 5. STUDENT CLUB FOR PROMOTING SDGs

The University has a number of active students’ clubs and associations which are working on sustainable initiatives. DIU student clubs are encouraged to organize national and international events having collaborations with the relevant NGOs, Industries and Government entities. Required funding is provided from the university to make the programs a success. Respective academic departments and institutes assign the faculty members to lead the students in this regard.



### 5.1. Students' Club and Associations

- Cultural Club
- DIU HR CLUB.(DIUHRC)
- DIU Creative Park
- DIU Bangladesh Study Form
- Sports Club
- DIU Computer and Programming Club (DIUCPC)
- Daffodil Prothom-Alo BondhuShova
- DIU Nature Study Club (DIUNSC)
- DIU Health Club (DIUHC)
- DIU Communication Club
- DIU Pharmacia Club
- DIU Creative Park (Dept. of MCT)
- DIU MUNA (Model United Nations Association)
- Career Club
- Entrepreneurship Club
- School of Entrepreneurs
- Business & Education Club
- Real Estate Association
- Software Engineering Club (SEC)
- DIU Volunteer Service Club
- English Literary Club
- Software Engineering
- Voluntary Service Club
- Air Rover Wing
- Robotics Club
- All Stars Daffodil
- Adventure Club
- DIU Film Society
- Daffodil Civil Engineering Club
- Business Round-Up & Motivational Cell (BRMC)
- Change Together

The following photographs bear the evidences of students' participation in the events arranged round the year on different occasions.



DIU Voluntary Club Distributed Warm Clothes to Destitute People



Youthmappers Club training at (DIU)



DIU Cultural Club Organized First Listen Session with Band team 'ArtCell'



Daffodil International Model UN 2020



Warm Clothes Destitution by DIU BNCC

## 6. INTERNATIONAL RECOGNITION

Daffodil International University achieved certificate of achievement from Kaufland Sustainability Initiative for its excellent contribution in chemical management and root cause analysis.

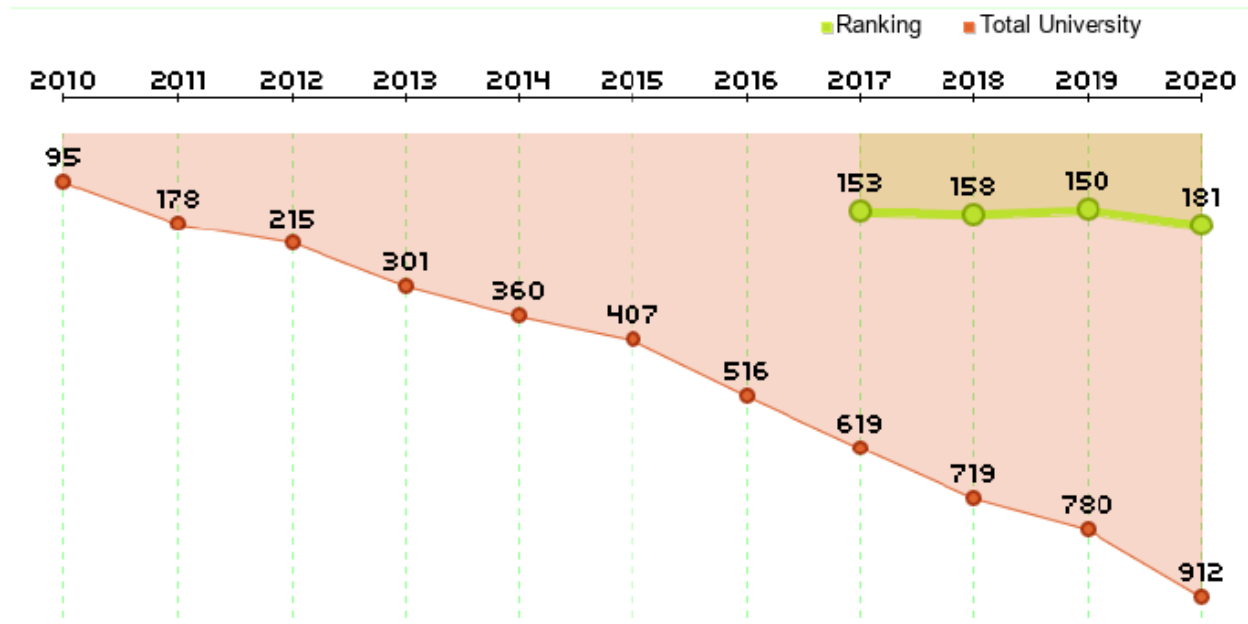
### 6.1. UI GreenMetric World University Rankings:

DIU Achieves 181<sup>st</sup> position globally in the UI Greenmetric world university rankings-2020. UI GreenMetric World University Rankings is an annual publication of university rankings on sustainability. It is an initiative from the University of Indonesia that ranks universities around the world based on their commitment and actions towards sustainability. UI GreenMetric World University Rankings aims to increase university awareness towards sustainability.

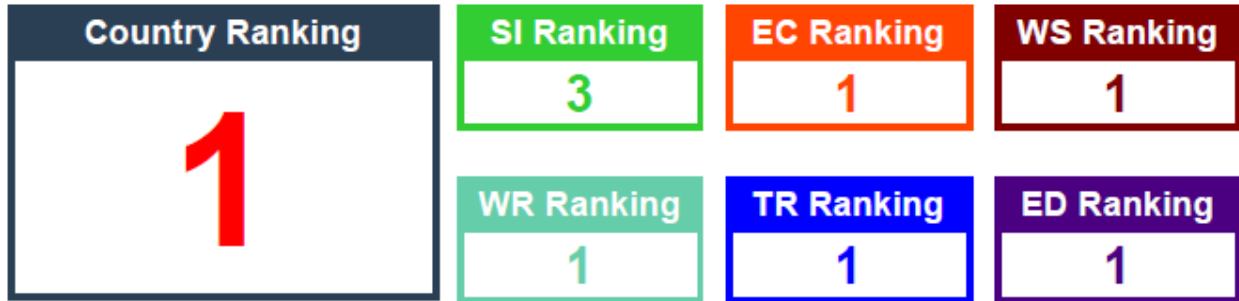
#### WORLD RANKINGS RESULTS SUMMARY



#### WORLD RANKINGS HISTORY



**RANKING POSITION IN BANGLADESH**



**6.2. Times Higher Education University Impact Rankings**

**DIU Achieves Prestigious Position in THE Impact Rankings-2021**



As per Times Higher Education (THE) Impact Ranking results 2021 released on 21 April, Daffodil International University has obtained a prestigious position in the range of 301 to 400 among 1115 universities worldwide. It is worth mentioning that DIU is placed first among seven universities ranked from Bangladesh. THE Impact ranking measured the achievement of the United Nations Sustainable Development Goals attained by the participated universities and ranked accordingly.

It is really an outstanding achievement that DIU has been ranked within top 50 among 966 universities ranked globally in Quality Education (SDG-4). It is a recognition of the university's continuous effort for development of teaching and learning as well as knowledge acquisition culture based on collaborative philosophy and importantly supported by the communication technologies.

Obtaining 81 percent score in Partnership for the Goals (SDG 17) is another milestone of DIU in this year's THE Impact Ranking. It signifies strong collaboration and relationships with the national and international organizations and the Government of Bangladesh to carry out academic and research activities, and address social, environmental and economic issues through partnerships.

The full rankings can be seen at:

<https://www.timeshighereducation.com/rankings/impact/2021/overall>

### 6.3. QS Asia University Ranking-2021



Daffodil International University (DIU) has achieved a prestigious position in QS Asia University Rankings-2021, released on 25 November, 2020. Based on the outstanding performance and initiatives, QS have recognized Daffodil International University as one of the top 450 universities in Asia. DIU has achieved fourth position among private universities in Bangladesh. In terms of Employer reputation, DIU has been ranked 144th in the region among more than 700 universities. In the 2021 edition, Daffodil International University performed among the top 60% in the QS World University Rankings (Asia) as a young university (established in 2002). This is not only a great achievement for Daffodil International University but for the country as well.

The QS World University Rankings is an annual publication of university rankings which comprises the global overall and subject rankings. The QS World University Rankings is the most-widely read university rankings in the world.

DAFFODIL INTERNATIONAL UNIVERSITY	
OVERALL RANK	OVERALL, THE INSTITUTION IMPROVED ON ITS 2019 PERFORMANCE BY MOVING FROM 451-500 TO 401-450.
<b>401-450</b>	

Besides, Daffodil International University was ranked within top 400 global universities by the Times Higher Education Impact Rankings-2020. DIU also achieved the top ranked university status in Bangladesh and 150th globally by the UI GreenMetric World University Rankings-2019. It is significant to note that Daffodil International University has been achieving global and regional

recognition and attention of both local and international students in terms of its quality of education, quality of research (publications and citations), graduates' employment, world class teaching-learning environment etc.

#### 6.4. DIU Again Topped among Private Universities in Bangladesh in Scopus Indexed Research Publications in 2020



Daffodil International University (DIU) obtained first Position again among Private Universities and 5th position among private and public universities in Bangladesh for its outstanding performance in Scopus Indexed Research Publications in 2020. Earlier DIU also obtained first position for its Scopus indexed publications in 2019 among the private universities in Bangladesh.

Daffodil International University, a promising private university in Bangladesh cultivates quality education and research for sustainable development of the teaching and learning practices of the university. The university has created a congenial environment for the faculty members and the students for doing research in a collaborative manner and networking with the local and foreign universities.

#### 6.5. Research Award Giving Ceremony 2021

The main characteristics of a complete university is creating knowledge. Research is the key component of a university. In this technological era, there is no alternative to become skilled in technology like AI and robotics. Daffodil International University is the best technology based University of the Country. Prof. Dr. Md. Sazzad Hossain, Honorable Member, University Grants Commission of Bangladesh (UGC)



Daffodil International University organized 'Research Award Giving Ceremony-2021' on 22 March 2021 at International Conference Hall of the university, Daffodil Smart City, Ashulia, Dhaka.

## 6.6. DIU Achieves Prestigious Position in Overall Ranking in U-MultiRank-2021

**U multirank**

**Daffodil International University**

**U**  
U-MULTIRANK PARTICIPANT

DAFFODIL INTERNATIONAL UNIVERSITY (DIU)  
**ACHIEVES A PRESTIGIOUS POSITION**  
WITHIN TOP 750 GLOBAL UNIVERSITIES  
RELEASED BY U-MULTIRANK 2021  
DIU IS THE ONLY UNIVERSITY FROM BANGLADESH  
WHICH PARTICIPATED IN THIS YEAR'S RANKING.

Daffodil International University (DIU) achieves a prestigious position- within top 750 global universities- released by U-Multirank 2021. DIU is the only university from Bangladesh which participated in this year's ranking. The multi-dimensional approach of U-Multirank compares the performance of universities across a range of different activities based on five performance criteria: Teaching and Learning, Research, Knowledge Transfer, International Orientation and Regional Engagement. Both local and international students can make better informed choices about what, or where to study based on preference.

It is worth mentioning that the University of Cambridge, University of Oxford, Cardiff University, University of Leeds, etc. are also in this year's ranking list. A total of 1948 universities from 97 countries worldwide have been included in the ranking list.

The full ranking list can be seen here:

<https://www.umultirank.org/compare?trackType=compare&sightMode=undefined&section=compareRanking&mode=likewithlike&instutionalField=true&pref-4=1&pref-4=2&name=null&co&sortOrder=desc&sortCol=overallPerformance>

## 6.7. Daffodil International University signed Updated Agreement of Magna Charta Universitatum (MCU) 2020

Daffodil International University (DIU) Bangladesh signed the Magna Charta Universitatum (MCU) 2020 which is an updated version of previous agreement to be more responsive to and resonate with contemporary challenges and concerns. On 28 April, Prof. Dr. S.M. Mahbub Ul Haque Majumder, Acting Vice-Chancellor of DIU signed the MCU on behalf of DIU. It contains principles of academic freedom and institutional autonomy as a guideline for good governance and self-understanding of universities in the future.

The Magna Carta Universitatum is a document to uphold university traditions & values and encourage bonds among universities to serves as a universal inspiration throughout the world. It was first signed on the 18th of September 1988 at the 900th anniversary of the University of Bologna, Italy.





## 6.8. DIU Ranked 4<sup>th</sup> by 'Webometrics' among Private Universities in Bangladesh

Daffodil International University Ranked fourth by 'Webometrics' among Private Universities in Bangladesh in 2021.

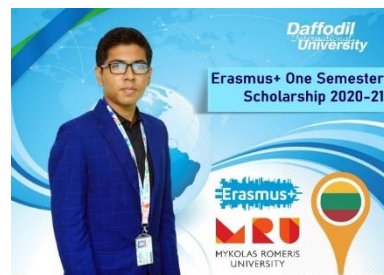
Details:

<https://webometrics.info/en/Asia/Bangladesh%20>



## 6.9. Recognition of DIU Alumni and Students

Abdullah-Al Mamun, Student of Department of Tourism and Hospitality Management, DIU achieved Erasmus+ One Semester Scholarship 2020-21 to study at Mykolas Romeris University (MRU) in Lithuania and departed from Bangladesh to join for Spring-2021 semester. This is a fully funded scholarship to cover his living, tuition fee and partial travel expenses during study period.



DIU alumnus Mohammad Mahfujur Rahman has successfully completed his Ph.D. from the Queensland University of Technology, Australia. His Ph.D. thesis title was "Deep Domain Adaptation and Generalization". He completed his B.Sc. in Electronics and Telecommunication Engineering in 2013 with a Gold Medal award in 4th Convocation of DIU.

Nasib Mohammad Arif, student of Multimedia and Creative Technology, DIU has achieved the Lithuanian State Scholarship 2020-21, a government scholarship of Lithuania to complete one semester at Mykolas Romeris University (MRU), Lithuania for the Spring-2021 semester. Good academic performance, effective extracurricular activities have helped him to achieve this scholarship that is covering living expense and tuition fees.





**Congratulations..!**  
**Dr. Joyraj Chakraborty**  
 For completing Ph.D. from The Silesian University of Technology, Poland

Research Engineer, Neostrain S.P.oo.  
 Year of Graduation: 2009  
 DIU Alumni ID: 052-19-284  
 Department of ETE, Batch- 052  
 Daffodil International University



**Proud of**  
**Md. Yeasin Arafath**  
 Software Engineer (AI)  
 Co-graph Inc. Tokyo, Japan



Year of Graduation: 2018  
 DIU Alumni ID: 143-15-4341  
 DIU CSE, Batch- 39  
 Daffodil International University  
 Lives In: Tokyo, Japan



**Congratulations..!**  
**Dr. Shamsul Kabir Masum**  
 For completing Ph.D. from Portsmouth University, UK & joining as Lecturer at the same University



Lecturer, Portsmouth University, UK  
 Year of Graduation: 2008  
 DIU Alumni ID: 051-19-235  
 Department of ETE,  
 Daffodil International University



**Proud of**  
**Ifthekharul Islam**  
 Sr. Engineer, Cyber Security  
 T-Mobile USA  
 Washington, USA



Year of Graduation: 2010  
 DIU Alumni ID: 061-19-334  
 Department of ETE,  
 Daffodil International University



## 6.10. International Collaboration with Millennium@edu for sustainable education



Recently, a memorandum of understanding (MoU) was signed between Millennium@edu Sustainable Education and Daffodil International University (DIU). The purpose of the MoU was to implement development projects, in a collaborative manner for example, 'Sustainable@edu project' in Bangladesh. With the signing of this MoU, both institutions agreed to undertake different initiatives to materialize jointly through organizing workshops at DIU which was expected to promote international collaborations. Additionally, there was a plan to promote knowledge sharing and leadership skills of the stakeholders in the area of education technology. However, key responsibility was imposed on the Daffodil International University because of their abilities and expertise.

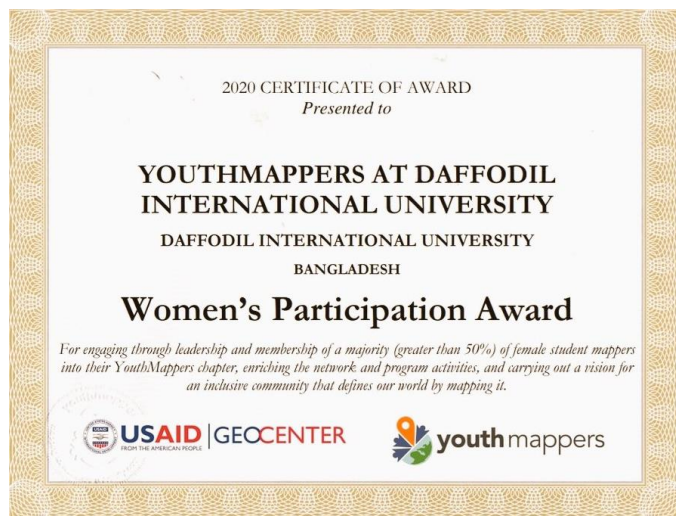
## 6.11. Certificate from Kaufland Sustainability Initiative

DIU has a long tradition of involvement in the international collaborations with their partners especially in the development sector. Due to their active participation in the Detox Project 2019, Kaufland Sustainability Initiative acknowledged DIU's contribution in a formal gathering. A certificate was also handed over to the DIU representative in the event which is presented below.



## 6.12. Sustainable Development Goals HelpDesk Membership

The Sustainable Development Goals Help Desk is a one-stop online service providing access to Sustainable Development Goal (SDG)-related tools, knowledge, products, data portals, expertise, advice and opportunities for peer-learning and regional South-South cooperation through thematic areas, covering a multitude of topics. Daffodil International University achieved the membership of the [Sustainable Development Goals HelpDesk](https://sdghelpdesk.unescap.org/technical-assistance/institutes).



## 6.13. Women's Participation Award

YouthMappers Club at Daffodil International University achieved the 'Women's Participation Award-2020' for their engagement in leadership of women empowerment and participation in different youth forums. Membership of a majority portion (more than 50%) of female student mappers into their YouthMappers Chapter, are enriching the network and program activities.

## 6.14. Sustainable Development Solutions Network Membership

DIU Got Membership of Sustainable Development Solutions Network in 2019. The UN Sustainable Development Solutions Network (SDSN) was set up in 2012 under the auspices of the UN Secretary-General. SDSN mobilizes global scientific and technological expertise to promote practical solutions for sustainable development especially the achievement of Sustainable Development Goals (SDGs) and the Paris Climate Agreement indicators. SDSN works closely with the United Nations agencies, multilateral financing institutions, the private sector, and civil society. SDSN is guided by a



Leadership Council, which brings together global sustainable development leaders from all regions and all sectors, including civil society, public, and private sectors. The Leadership Council acts as the board of SDSN. Much of SDSN's work is led by National or Regional SDSNs, which mobilize knowledge institutions around the SDGs. Our research & policy work organizes experts from around the world on the technical challenges for implementation of the SDGs and the Paris Climate Agreement. The SDG Academy leads the education work of the SDSN.

### 6.15. Dr. Md. Sabur Khan was elected as the First Vice President for (2021-2022) of AUAP



A delegation of Daffodil International University (DIU) led by Dr. Md. Sabur Khan, Chairman, Board of Trustees, DIU has joined 14th General Conference of Association of Universities of Asia and the Pacific (AUAP) dated on 18 November 2020 hosted virtually by Lyceum of the Philippines University, Batangas, Philippines. During the AUAP General Assembly Meeting, Dr. Md. Sabur Khan was elected as the First Vice President for (2021-2022) of AUAP.

Likewise, Dr. Peter P. Laurel, President, Lyceum of the Philippines University has become the President of AUAP and Dr. Hari Mohan Gupta, Chancellor, Jagran Lakecity University, India was elected as 2nd Vice President of AUAP. It should be mentioned that after two years, Dr. Khan will lead AUAP as the 17th President for 2 more years till 2024.

## 7. SDG POLICY GUIDELINES

### 7.1. Policy Guidelines on Implementation of Sustainable Development Goals (SDGs)

According to the United Nations, Sustainable Development Goals (SDGs) were adopted by its member states to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. The proper integration of policy interventions in all 17 areas of SDGs will lead to take action in one area will affect outcomes in others and eventually development must balance social, economic and environmental sustainability. As a higher education institute, Daffodil

International University (DIU) is committed to respond to this universal call for SDGs and take actions to comply with the United Nation's endeavor and to support the Government of Bangladesh for achievement of desired outcomes. In this regard DIU is working closely with the Government, private sector, civil society and citizens jointly for implementation of SDGs and to make sure that the coordinated effort can create a better and sustainable planet for the future generations. With an aspiration to work for SDGs, DIU has formulated a number of policy guidelines

Higher Education Institutions have a pivotal role to play in educating the people regarding the targets of sustainable development goals (SDGs) set by the United Nations and facilitate achieving the national SDG targets of any country. Education and research have been mentioned in a number of sustainable development goals (SDGs). Daffodil International University (DIU) strives to formulate a policy on SDGs to take initiatives to adopt sustainable practices in its all development activities as part of its societal and environmental responsiveness. SDGs have open up a new horizon for DIU to explore its capability, readiness and initiatives towards ensuring sustainable development aligning with the national SDGs targets as well as contribution to the global sustainable development initiatives.

- Building awareness among university stakeholders, government and non-government counterparts regarding sustainable development goals and involve them for implementation of SDGs.
- Identify challenges, opportunities, targets and gaps for ensuring the true achievement of the SDGs.
- Undertake various research projects and conduct research by the relevant departments and sections of DIU for innovations and solving projects with regard to achievement of SDGs.
- Encourage researchers to collaborate with foreign university faculty members for research and publications.
- Conduct events, demonstrations, activities in collaboration with the government and NGOs for implementation of SDGs.
- Develop a sustainable development culture at the university as well as in the country for ensuring a sustainable living environment for future generations.

DIU library will do promotional activities to disseminate the policy among the local communities and take necessary initiatives for implementation of this policy. The Librarian will take record of use of library by the local communities. He will also make a yearly report and submit the report to the Vice Chancellor and the Division of Research of the university.

### **Policy**

1. There will be an approved central SDGs committee in DIU to identify the current status of knowledge on targets of SDGs.
2. The approved central SDGs committee will form separate subcommittees in each academic department to look after all the relevant SDGs aligning with the central targets and initiatives

of DIU. The following matrix will be helpful for playing role by each academic departments and division of the university.

3. Responsibilities of the departments for implementation of corresponding SDGs are indicated in the following table.

SDGs and assigned Departments	Activities
SDG 1 : End poverty in all its forms everywhere Department of Entrepreneurship and Department of Student Affairs	<ul style="list-style-type: none"> <li>○ Create entrepreneur, encourage entrepreneurship , conducting research</li> <li>○ Organize awareness building programs, dissemination of innovations and good practices</li> <li>○ Collaboration with relevant government and NGOs</li> </ul>
SDG 2 : End hunger, achieve food security and improved nutrition and promote sustainable agriculture <b>Department of Nutrition &amp; Food Engineering</b>	<ul style="list-style-type: none"> <li>○ Undertake projects, conduct collaborative research, dissemination of good practices among the citizens, involve neighboring communities and stakeholders</li> <li>○ Provide support to communities involving students and teachers for motivation and changing their food habit.</li> </ul>
SDG 3 : Ensure healthy lives and promote well-being for all at all ages Department of Public Health	<ul style="list-style-type: none"> <li>○ Conduct research and publish papers</li> <li>○ Work closely with the local communities of all ages to ensure their healthy lives</li> <li>○ Provide counseling and guidance in a regular manner</li> <li>○ Update statistics of the services given to the citizen and the number got benefits</li> </ul>
SDG 4 : Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all Institutional Quality Assurance Cell IQAC)	<ul style="list-style-type: none"> <li>○ Undertake analyses of the four targets (sub-categories) of SDG 4 and define activities relevant to all the four categories</li> <li>○ Make a five-year plan for implementation of the activities relevant to higher education. Share the plan with all the departments for implementation.</li> <li>○ Involve all the departments and faculty members to undertake the tasks</li> <li>○ Promote use of communication technologies at all levels for quality education</li> <li>○ Review progress on a regular basis and identify improvements and weaknesses for further development</li> <li>○ Take initiatives to support other three agenda of Quality Education (SDG4)</li> </ul>

<p>SDG 5 : Achieve gender equality and empower all women and girls Directorate of Students' Affairs Disciplinary Committee</p>	<ul style="list-style-type: none"> <li>○ Monitor and promote implement the existing policy of the university</li> <li>○ Ensure rights and facilities for women and girls working and studying in the university</li> <li>○ Disseminate the results and impact to other organizations/ institutions for their encouragement and implementation of the issues related to SGD5</li> </ul>
<p>SDG 6 : Ensure availability and sustainable management of water and sanitation for all  Department of Environmental Science &amp; Disaster Management (ESDM) Department of Civil Engineering (CE) Planning &amp; Development Division</p>	<ul style="list-style-type: none"> <li>○ Monitor the water and sanitation facilities available to the stakeholders within the campus and neighboring communities</li> <li>○ Highlight the real picture of the neighboring citizens to the government and NGOs who are responsible for them</li> <li>○ Ensure the facilities within the university campuses. Make proposals for budget every year to fulfil demand of the users</li> </ul>
<p>SDG 7 : Ensure access to affordable, reliable, sustainable and modern energy for all  Department of Electrical &amp; Electronic Engineering (EEE) Department of Architecture Planning &amp; Development Division</p>	<ul style="list-style-type: none"> <li>○ Undertake new projects and promote implementation of the ongoing projects on sustainable and modern energy for all</li> <li>○ Involve government and NGOs for implementation of the projects</li> <li>○ Collaborate with the international partner universities for implementation of the joint projects and funding</li> <li>○ Conduct research involving the students and the teachers</li> </ul>
<p>SDG 8 : Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all  Department of Business Administration (BA) Department of Real Estate (RE) Department of Innovation &amp; Entrepreneurship (IE)</p>	<ul style="list-style-type: none"> <li>○ Conduct empirical research to discern achievement of SDG 8 in the context of Bangladesh</li> <li>○ Review best practices of the other successful countries and take initiatives for implementation with collaboration of the relevant Ministry/Division of the Government</li> </ul>



<p>SDG 9 : Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation Planning &amp; Development Department of Architecture Division of Research</p>	<ul style="list-style-type: none"> <li>○ Conduct research and create innovative design for Infrastructural development in the context of Bangladesh</li> <li>○ Work closely with the government for promoting targets of the governments related to SDG9</li> </ul>
<p>SDG 10: Reduce inequality within and among countries Department of Students' Affairs Disciplinary Committee</p>	<ul style="list-style-type: none"> <li>○ Monitor inequality issues in within the university</li> <li>○ Promote advocacy to remove barriers if any with the university</li> <li>○ Disseminate best practices and examples to the other institutions, industries, office environments</li> <li>○ Collaborate with the government to ensure achievement at all sectors</li> <li>○ Conduct demonstrations for awareness building throughout the country involving NGOs who are working implementation for SDG10</li> </ul>
<p>SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable Department of Architecture Planning &amp; Development</p>	<ul style="list-style-type: none"> <li>○ Make a plan to demonstrate history and trend of human settlement, and innovations</li> <li>○ Do research to identify future realist and sustainable settlement approach in the context of Bangladesh</li> </ul>
<p>SDG 12: Ensure sustainable consumption and production patterns Planning &amp; Development Department of Civil Engineering Department of Textile Engineering</p>	<ul style="list-style-type: none"> <li>○ The assigned Departments will identify the research gaps in the proposed area</li> <li>○ Undertake research projects in collaboration with the relevant government institutions and international partner universities</li> </ul>
<p>SDG 13: Take urgent action to combat climate change and its impacts Department of Environmental Science &amp; Disaster Management Department of Electrical &amp; Electronic Engineering</p>	<ul style="list-style-type: none"> <li>○ Take initiatives for implementations of the current research projects</li> <li>○ Conduct research and disseminate knowledge to all stakeholders including the government</li> <li>○ Conduct awareness building program on a regular basis</li> <li>○ Collaborate with the government Ministries and departments to promote implementation of SDG13</li> </ul>
<p>SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development</p>	<ul style="list-style-type: none"> <li>○ Undertake research in collaboration with the partner universities at home and abroad</li> </ul>

<p>Department of Environmental Science &amp; Disaster Management (ESDM)</p>	<ul style="list-style-type: none"> <li>○ Publish papers in Journals and conferences to disseminate knowledge</li> </ul>
<p>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 Department of Environmental Science &amp; Disaster Management (ESDM) Planning &amp; Development</p>	<ul style="list-style-type: none"> <li>○ Undertake research in collaboration with the partner universities at home and abroad</li> <li>○ Publish papers in Journals and conferences to disseminate knowledge</li> </ul>
<p>SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels Department of Development Studies Department of Law Department of Journalism &amp; Mass Communication</p>	<ul style="list-style-type: none"> <li>○ Make a plan to design several activities and conduct awareness buildings programs involving the teachers and the students</li> <li>○ Conduct survey to figure out adverse practices of the society and demands of the citizens</li> <li>○ Take help from different electronic and print medias to highlight the relevant issues</li> <li>○ Work closely with the government departments for bringing a changes in the society a s a whole</li> </ul>
<p>SDG 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development Department of Development Studies Division of Research International Affairs Division of Students' Affairs</p>	<ul style="list-style-type: none"> <li>○ As a higher education institution develop several models of achievements of SDGs in different country contexts</li> <li>○ Collaborate with the Ministry of Planning and other relevant ministries to collect documents/ evidence to understand up to date achievement of SDGs (1-17)</li> <li>○ Establish networking with the government and NGOs for organizing joint programs and provide funding for implementations of projects, initiatives, events, demonstrations etc. throughout the countries</li> <li>○ Conduct research on achievement of sustainable development goals</li> <li>○ Make a yearly report on achievement of sustainable development goals in the content of Bangladesh and contribution from Daffodil International University</li> </ul>

4. Each subcommittee will undertake necessary initiatives within their SDG(s) horizon to comply the central targets of DIU related with SDGs. The initiatives may include (but not limited to):
  - Formulating other relevant policies (if required)
  - Organizing events/cross discipline dialogues with the Government agencies/NGOs/other organizations
  - Conducting survey(s) and research on specific SDGs targets for finding an easy way for achievement of the targets
  - Partnering, collaborating and cooperating with the initiatives of the Government and NGOs with a view to implement the specific targets of relevant SDG(s)
  - Involving students and local community in the SDG related initiatives
  - Creating awareness among students, teachers, guardians, non-academic staff, local community etc. regarding the SDGs and their positive impact on the world.
  - Participating in relevant events, organized by others, both at home and abroad.
  - Developing necessary recommendations and comments which are significant for ensuring implementation of targets of SDGs and share the same (through DIU central SDGs committee) with the Government for inclusion in their policy initiatives.
5. Each subcommittee will keep record of each initiative and preserve those for future requirement
6. Each subcommittee will prepare an annual report incorporating all of its initiatives during that particular year and submit the report to the Convener of the central SDGs committee as per their given timeline.
7. The Central SDGs committee will guide and monitor the activities and initiatives of all subcommittees through holding at least two meetings per year to ensure that they are working in the right track.
8. Each subcommittee will hold at least three meetings for planning and implementation of their targets, initiatives and activities.

All the subcommittees and the central SDG committee will be reportable to the Vice Chancellor of the university.

## **7.2. Policy for Creating Opportunities for Local Communities for Accessing Library Resources**

As an academic institution Daffodil International University has responsibilities towards educating its local communities. DIU library has huge number of print and online resources in a wide range of disciplines. The local communities of all ages can have benefit from reading these resources in the library. A separate corner of the library will be used for this category of readers.

The purposes of this initiative are to acquaint the local people with the resources of DIU, involve them in using different types of resources, for example, printed materials, audio, and videos and enhance their knowledge of the society, international current affairs, health and safety issues, disaster tackling strategies etc.

1. All students of Daffodil International University and outsiders/local people will have on site access to DIU Library.

2. The outsiders/local general people will be allowed to access DIU library educational resources everyday (except weekend and holidays) from 3 p.m. to 5 p.m.
3. Library will make special provisions as needed to permit users with disabilities to examine sources, retrieve materials, and access services through the assistance of DIU library staff.
4. DIU students will have to show their valid identity card, provided by the university while the outsiders/local general people will be required to produce other acceptable identification and sign in before entering the DIU Library premises.
5. Everyone who intends to enter and use the DIU library facilities will have to keep their bag, mobile phone, electronic device and any other belongings in DIU locker free of cost. They may be asked to show the contents of their backpacks, book bags, briefcases etc. if it seems required by the Library security staff.
6. Everyone (DIU students, Staff and outsiders/general public) needs to surrender their identity card (University ID card for DIU students and Staff; and National ID card or any other equivalent ID for local people/outside) to the Library officials before using any library resources (Books, journals, periodicals, published research articles, research reports etc.
7. There will be a corner for daily newspaper reading with access to all in general.
8. Only DIU students and staff will be eligible to borrow library resources for a certain period of time with completing an online guarantee form that s/he will be responsible if any damage is done with the borrowed resource(s). There will be online arrangement for borrowers to see their borrowing history and status through their user profile, provided by DIU Library upon registration by eligible borrower.
9. The users will also get free access to library educational resources through online library facility though outsiders/local general public will get limited access to its resources.
10. The information services of DIU Library are available to all individuals on site, by telephone, by correspondence, and electronically. There will be facility of photocopier machine in the library for use by all individuals (both DIU stakeholder and outsiders) on site for which they will be charged.
11. DIU Library will provide a noiseless, healthy atmosphere which is conducive for individual study and research. The library will also ensure a comfortable, neat & clean, and safe place for both library users and library staff. No one is allowed to make noises or disturb other users in the library. If anyone violates the rule, s/he may be asked to leave the place immediately, otherwise, administrative measures will be taken against him/her through the Disciplinary Committee of DIU as per the code of conduct policy of the university.
12. DIU library will do promotional activities to disseminate the policy among the local communities and take necessary initiatives for implementation of this policy. The Librarian will take record of use of library by the local communities. He will also make a yearly report and submit the report to the Vice Chancellor and the Division of Research of the university.

### 7.3. Pedestrian Walkway Safety Policy

#### PURPOSE

The purpose of the Pedestrian Walkway Safety Policy is to ensure the safety of the pedestrians in the walkways which they use for their safe movement within the university campus. Moreover,

another intention is to create awareness of the wheeled vehicles drivers from entering those walkways of the pedestrians. The Policy will also help the university stakeholders to be conscious about their health and safety by using walkways within the university campus.

#### **RULES**

1. The walkways at the university campus are supposed to be used by students, teachers, administrative employees, guardians, guests, and other stakeholders as pedestrian walking.
2. The security personnel will monitor and ensure that no vehicular movement in the pedestrian walkways. Vehicular movement may be allowed for any special situation but not as a regular practice which will be approved and monitored by campus administration.
3. Emergency Service Vehicles, such as: firefighting vehicles, ambulance, and police car will be allowed to access the pedestrian walkways when responding to emergency situations.
4. There will be special arrangements in the walkways for facilitating the movement of especially abled persons/persons with disability.
5. The campus administration will be responsible for keeping the walkways clean and dust-free.
6. There will be small benches under the tree shade beside the walkways so that the pedestrian may sit over there if they feel tired of walking
7. Bi-cycles are allowed in the walkways but motorcycles and other motorized vehicles are prohibited in the walkways.
8. No vehicles (irrespective of motorized and non-motorized) are allowed to park in the walkways which impedes the pedestrian movement.
9. If anyone violates the above rules of this policy guidelines, s/he will be monetarily penalized and issued official show cause letter.
10. The policy will be circulated widely among all stakeholders

### **7.4. Zero Emission Policy**

#### **BACKGROUND**

According to United Nations Sustainable Development Goals (SDGs) were adopted to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. The proper integration of policy interventions in all 17 areas of SDGs will lead to take action in one area will affect outcomes in others and eventually development must balance social, economic and environmental sustainability. As a higher education institute, Daffodil International University (DIU) is committed to formulate policy guidelines in several areas of SDGs and take actions to comply with the United Nation's endeavor and to support the Government of Bangladesh for achievement of desired outcomes. At DIU, we focus on social and environmental sustainability in the first instance which is aligned with SDG 11 for implementation. As such, the Zero Emission vehicle Policy with the aim of reducing carbon emission (SDG 13) from all vehicles of DIU has been formulated for execution by the relevant stakeholders.

#### **OBJECTIVE:**

The objective of the Zero Emission vehicle Policy of Daffodil International University is to support

the environment by reducing the carbon emission and improving the air quality in Dhaka city by adopting Zero Emission Transport (ZET) and to ensure a healthy and sustainable atmosphere for the next generation.



#### **ZERO EMISSION TRANSPORT (ZET):**

A zero-emissions Transport (ZET), is a vehicle that emits no exhaust gas from the onboard source of power. The following list of vehicles are considered to be ZETs:

- Bicycles
- Electric bicycles
- Battery operated (electric) vehicles
- Vehicles with catalytic converter to reduce carbon emission

#### **POLICY:**

1. This policy on Zero Emission Transports of Daffodil International University will be considered as a guideline to gradually reduce the carbon emissions from DIU transports to support sustainable environment
2. Bicycles movement within the campus will be encouraged. There will be bicycles in the specific parking stand in the campus from where students, teachers, administrative employees can use those bicycles free of charge to avoid carbon emissions completely.
3. The students, teachers and administrative employees of the university will be encouraged to use the pedestrian walkways in the campus. The planning and development department will be responsible for this.
4. The private vehicles will be discouraged by the university through providing separate transport facilities for the teachers, students and administrative employees. Transports wing will be responsible for this.
5. Visitor's vehicles will not be allowed to enter into the campus area. Safety and Security wing will be responsible for this.
6. The university administration has taken initiatives to install Catalytic Converter in DIU Transports (Buses) and other light transports (cars & minibuses) to Reduce carbon Emissions. The Department of Environmental Science and Disaster Management will oversee this matter and be responsible for this.

7. The university stakeholders who use personal transports, specially, teachers, students and administrative employees, will be encouraged to catalytic converter to reduce carbon emission.
8. This policy guidelines will be circulated widely among all stakeholders.

### 7.5. Sustainable Procurement Practice

Daffodil International University has been implementing the sustainable procurement practices. All the procurement procedures of DIU are maintained through online which does not require any use of paper. Sustainable ethical procurement guidelines is maintained during the procurement.

User Guide for Vendors:

[https://etender.daffodilvarsity.edu.bd/Online\\_Procurement%20System\\_User\\_Manual\\_Vendor%20Ver-1.1.pdf](https://etender.daffodilvarsity.edu.bd/Online_Procurement%20System_User_Manual_Vendor%20Ver-1.1.pdf)

### 7.6. Other Relevant Policies

A number of SDG policy guidelines were developed before and made available online. The titles of these policies are given below with web links.

[Maternity Leave Policy](#)

[Anti-Harassment and Non-Discriminatory Policy](#)

[Policy for Managing Women's Career Counseling Services](#)

[Women Access, Participation, Counseling and Mentoring Policy](#)

## 8. EVENTS AND AWARDS

Daffodil International University regularly arranges a good number of events related to the sustainable development goals (SDGs) round the year. A number of selected events in collaboration with the government institutions, NGOs, local and international partners are given below.

### 8.1. Webinar on, "Maritime Sustainability for Agenda 2030"

The fifth webinar of the series titled, "Maritime Sustainability for Agenda 2030" was co-hosted with Global Compact Network Bangladesh (GCNB) and Daffodil International University on July 28 over Zoom. The topic of the webinar is related to SDG: Life below Water. The session convened high-level speakers and experts in the Maritime Industry. The speakers gave an overview of the Global Maritime Industry, shared insights on the current critical sustainability issues, success and challenges related to the Maritime Industry and our progress towards the Agenda 2030.



### 8.2. Psychological session on "Prevent Suicide: Be a Lifesaver"



According to the World Health Organization (WHO), in every year close to 800 000 people die due to suicide, which is one person every 40 seconds. Suicide is the second leading cause of death among 15-29 year-old globally. Thus, suicide is considered a major public health concern but unfortunately, it is often neglected by us. However, suicides are preventable with timely if the person with suicidal thought receive the caring support they need to. To discuss this, DIU Psychological center organized the live psychological session on "Prevent Suicide: Be a Lifesaver" (related to SDG-3) on 17 July 2021.

### 8.3. Newspaper Article on "World Food Day and future of food security in Bangladesh"

"Grow, Nourish, Sustain Together: Our actions" is the slogan of World Food Day-2020. This year the day is different from the last several years and because of the pandemic caused by novel coronavirus.

To date this virus affected 35 million and caused more than 1 million deaths all over the world. Of this, 3.6 million are people affected in Bangladesh with around 5.5 thousand deaths. The percentage of deaths worldwide and Bangladesh are 2.95% and 1.4% respectively. Irrespective of system error, the death toll in Bangladesh is around 50% less than the total cases reported all over the globe. This definitely raises hope for the people of Bangladesh.





We can look into how the nutritious food and sustainable food habits of the common people in Bangladesh with their 'growing together' mentality has helped them to survive with considerable confidence during the pandemic. SARS-COV-2 is an enveloped RNA virus which has no known antidote except for the human immunity system, the best fighter against any viral outbreak or viral diseases. Hence, herd immunity has been prescribed as the best weapon to fight against this invisible enemy.

If we look for the sources of the immunity in humankind, we can roughly divide them in 5 major categories – smart food habits, adequate rest, stress management, physical exercise, and avoiding intoxicating drinks. Among these five major factors, Bangladeshi people enjoy a very relaxed life because of their very low expectation levels and the citizens categorized as low-income group have the opportunity to do very hard work which naturally boosts their immunity. Additionally, the village people have the opportunity to eat fresh foods with organic vegetables and plenty of fish from natural sources. This helps them to boost their immunity. And then there is the social and state-imposed embargo on alcoholic drinks. It is also evident from recent antibody-based studies among the dwellers of Dhaka city, that about 50% of the citizens have been affected by COVID-19 but are still living normal lives. This is surprising but not miraculous considering if the food habits of the Bangladeshi individuals.

Historically Bangladeshi people would consume a lot of spices like ginger, cloves, turmeric, garlic, onions, cinnamon, cardamom and other additives full of secondary metabolites to enhance their immune system. Being “machhe bhate Bangalee” [Bengalese with their fish and rice], perhaps enhances their immunity significantly.

Moreover, agricultural research has increased the availability of different kinds of fruits and vegetables along with the grains round the year and the prices are comparatively affordable compared to neighboring countries and developed nations. For example, the nutritious fruit guava may cost only 50 cents. So food habits and availability of nutritious foods boost the immunity of the people of Bangladesh.

On the other hand, the manipulated increase in the prices of essentials by dishonest persons is an obstacle to food security and safe food. The use chemically treated preservatives and the harmful colouring agents to save production costs and inflate profits, are major challenges to ensure adulteration-free foods for all. Most of these additives have been reported to cause different diseases like kidney failure, cancer and so on. The number of cancer patients has increased alarmingly, if we compare the data available for the last 20 years. Let us come forward to change and ensure a country with safe food. Let us make the slogan “Grow, Nourish, Sustain Together: Our actions” true and effective for our countries

In addition, the threats and complications related to reproductive health, for example polycystic ovary, becoming very common for the people living in urban areas. The food sources for poultries, hatcheries and other farms have been reported to be contaminated with heavy metals and chlorinated compounds which have potential to mutate any DNA followed by the personalized diseases related to DNA mutation. In most cases, those who are involved in production of adulterated foods or contaminated foods they do not have the minimum knowledge about the adverse effects of these additives or they do not have any modern technologies to identify those harmful chemicals. This makes it essential to establish training institutes to train the businesspersons and producers.

The Food Safety Authority provides a support to ensure safe food for the citizens of Bangladesh, while the limitations to act independently and lack of experts impose some obstacles. Trying to bring any change by only implementation of laws in a third world country will never be success in eradicating bad practices. The only way is to make people aware about the bad impacts and long-term effects of consuming adulterated foods.

Conjoint and constructive actions to ensure enough food with minimum possible chemical additives and unnecessary chemical fertilizer free production of vegetables, crops and other food products will ensure safe food for all. This will allow us to establish a healthy and nutritionally sound generation and grow together to establish a prosperous and compassionate society.

We need to keep in mind that the forthcoming world will be evaluated by their abilities to ensure safe food and food security for all of its citizens. It will help us protect our future generation from any kind of pandemic that could be more harmful than the COVID-19. So let us come forward to change and ensure a country with safe food. Let us make the slogan “Grow, Nourish, Sustain Together: Our actions” true and effective for our countries.

*Sheikh Mahatabuddin is Associate Professor at the Department of Nutrition and Food Science, Daffodil International University, Dhaka*

Source: <https://en.prothomalo.com/opinion/world-food-day-and-future-of-food-security-in-bangladesh?fbclid=IwAR2lobTT6bx8BrA-JHtxXfXdkUczbyBjZmVbCbME3hQkJIoXVGC4X9valCA>

#### 8.4. Week-long Mental Health Awareness Program

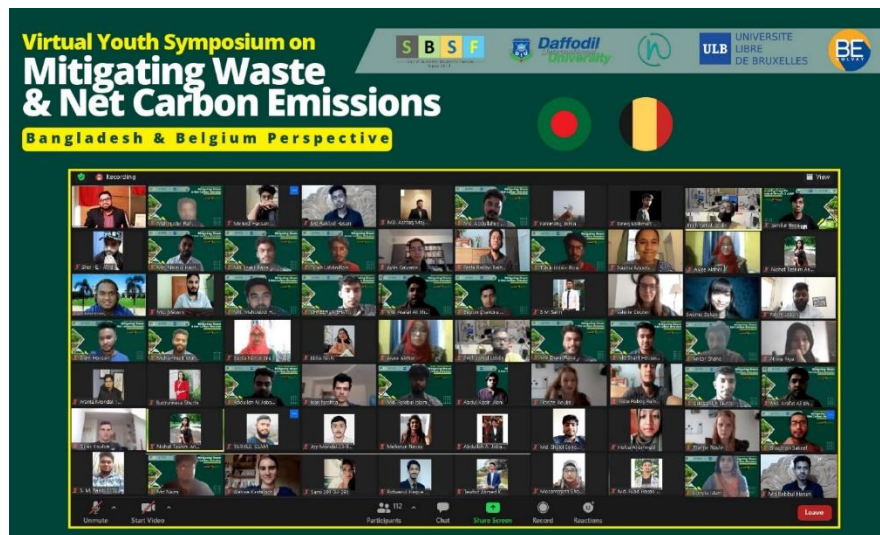


In the context of COVID-19, well trained, qualified and experienced psychologists from the Psychological Counseling Center of DSA Office and some of our Faculty Members of DIU conducted the week-long Mental Health Awareness Program at DIU.

#### 8.5. Virtual Youth Symposium on Mitigating Waste Management and Net Carbon Emissions

Virtual Youth Symposium on Mitigating Waste Management and Net Carbon Emissions was jointly organized by Social Business Students' Forum (SBSF), Bangladesh BD, and Nexense Social Business Club (NSBC), Belgium BE with the support of International Affairs, DIU.

After providing quality inputs through panel discussions of two major issues delivered by the local and foreign speakers- Fahim Uddin Shuvo, Founder and Managing Director, GARBAGEMAN, Bangladesh & Jérôme Meessen, International Expert, Energy & Climate Change Consultant at Climact, Belgium, the discussions ended with Question & Answering Sessions. The discussants from Bangladesh and Belgium who have been in the chair of panel discussions circulated in advancing discussions on "Sustainable Process of Waste Treatment" and "Race to Reach Zero Net Carbon Emissions" from the perspectives of respective countries.



The program was inaugurated by Prof. Dr. Mohammed Masum Iqbal, Convener of SBSF & Dean, Faculty of Business & Entrepreneurship, DIU as the Special Guest. The symposium was attended by more than a hundred participants from Bangladesh, Belgium, and other different countries along with organizers of this program.

### 8.6. Bi-Cycle Rally at Daffodil Smart City to Encourage Zero Emission Vehicles

To celebrate the 50<sup>th</sup> Independence Anniversary of Bangladesh, Daffodil International University organized Bi-Cycle Rally at Daffodil Smart City, Ashulia, Dhaka. This initiative was taken to encourage Zero Emission Vehicles in campus.



### 8.7. Celebration of DIU's Achievement THE Impact Rankings-2021 towards achieving the SDGs

To mark the holy Eid-UI-Fitr and to celebrate the achievement of its first position among universities ranked by the Times Higher Education Impact Rankings-2021, Daffodil International University distributed "A bag of happiness" among 3000 poor people of different places of Bangladesh maintaining properly the social distancing and health guidelines. A Bag of Happiness is such an initiative that Daffodil International University initiated to celebrate DIU's achievement of the top position among universities ranked from Bangladesh and ranked within top 400 global universities in the recently announced Times Higher Education Impact Rankings 2021 for its sustainable and environment-friendly initiatives and activities towards achieving the SDGs of the UN. Due to the COVID-19 situation, a lot of people have lost their jobs and are now leading a miserable life. Bearing this in mind, DIU took the innovative way of celebrating its global rankings achievement through distributing a bag of happiness containing daily necessities of a family like: rice, potato, lentil, oil, onion, sugar, Lassa semai etc.



### 8.8. Partnership: Russia-Bangladesh Virtual Exchange Project

Daffodil International University, Bangladesh and Peter the Great St. Petersburg Polytechnic University, Russia has jointly started Russia-Bangladesh Virtual Exchange Project-2021 with the theme Idea Hub towards better education, supported by International Affairs, DIU. On March 21, 2021 the first session was held with active participation of five Russian and seven Bangladeshi students where they had ice breaking sessions,

**Russia-Bangladesh Virtual Exchange Project 2021**  
Idea Hub Towards Better Education

**Program includes:**

- Ice-breaking Session
- Group Work
- Ideas Accumulation
- Project Presentation
- Cross-Cultural Sharing and More..

**March 21 to April 20, 2021**

Jointly Hosted by  
Daffodil International University, Bangladesh  
Peter the Great St. Petersburg Polytechnic University, Russia

Supported by:  
International Affairs, DIU

group discussion in breakout rooms, collaborative learning under the supervision of academic personnel.

Faculty members of DIU and SPbPU are supervising the joint educational program with the vision of students' involvement in global education and exploring students' point of view due to the sudden shift in the education sector.

### 8.9. COVID 19 Vaccine Registration Camp at DIU

DIU established a Coronavirus Support and Vaccine Registration Center at its premises for the wellbeing of the surrounding community and its stakeholders.



### 8.10. e-talk on Challenges of Online Teaching and Learning during Covid-19

Department of Real Estate of Daffodil International University and University of Malaya, Malaysia jointly organized an e-talk Challenges of Online Teaching and Learning during Covid-19 on 19 March 2021.

### 8.11. Banglabandhu DIU Mini Marathon 2021: Ensuring Good Health



Daffodil International University organized 'Banglabandhu DIU Mini Marathon 2021' marking the birth centenary of the founder of the nation Bangabandhu Sheikh

Mujibur Rahman. Civil engineering student Mohammed Abdikani became 1st, software engineering student Nahid Kawsar Nishat stood 2nd while electrical and electronic engineering student Ratul won the 3rd position.

## 8.12. Webinar on "Mobile Communication in Bangladesh Challenges of the Future": Industry Partnership

The Department of Electronics and Telecommunication Engineering, Daffodil International University in association with Mobile Telecom Operators of Bangladesh (AMTOB) organized a webinar on "Mobile Communication in Bangladesh Challenges of the Future" on 14 March 2021.



[Webinar Link \(Record\)](#)



gender equality (SDG-5).

## 8.13. Honoring Female Employees on International Women's Day 2021

International Women's Day is celebrated globally on March 8 to commemorate the cultural, political, and socioeconomic achievements and contribution of women. Daffodil International University also celebrated the day by greeting the female academic and non-academic staff by the male with a red rose as a token of appreciation. The celebration of international women's day also signifies the sincere implementation of



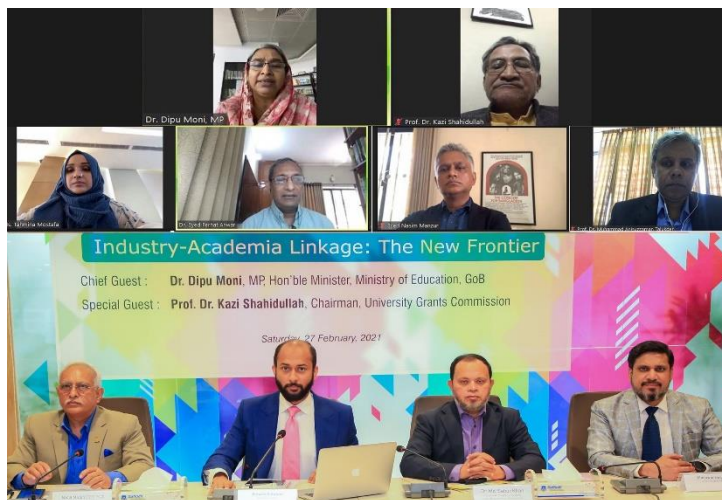
#### 8.14. Medical services at DIU Medical & Fitness Center



Daffodil International University (DIU) always cares for students, teachers and employees. Students, faculty and employees may become sick while doing classes and performing official activities. They may be required emergency medical care, where DIU is strictly complying with emergency as well as first aid as and when needed. DIU medical center always aims to ensure prompt healthcare support for all the Students, Teachers, Officers and Staff. Well-equipped DIU Medical Centre is situated in both main campuses and at the city campus. Students, teachers and other employees receive treatment & medical advice here.

### 8.15. DIU and DCCI initiative on Industry Academia Linkage: The New Frontier (SDG 9)

Daffodil International University (DIU) and Dhaka Chamber of Commerce & Industry (DCCI) jointly organized a webinar on *Industry Academia Linkage: The New Frontier* for accelerating development to achieve the fourth industrial revolution (4IR). The resource person, discussants, chief guest and others laid emphasis on working together between universities and private sectors to convert the country's youth population into skilled human capital. DCCI and DIU will be working to arrange internationally accredited skills development training in the country for continuous re-skilling and up-skilling programmes as well as research and innovative programme to offer high quality post-graduation education and training. Dr. Md. Sabur Khan, Chairman, Board of Trustees of Daffodil International University presented the keynote paper in the webinar.



Honorable Education Minister Dr. Dipu Moni said that there is a need to change mindset to achieve better industry and academia linkage. For a sustainable and commercially viable research ecosystem, she urged the private sector to invest more in the education sector. UGC Chairman Prof. Dr. Kazi Shahidullah, urged the private sector to invest more in research and education sector.

### 8.16. Webinar on "Reenergizing the Economy through Sustainable Finance"

Daffodil International University along with the Global Compact Network Bangladesh (GCNB) organized the webinar on "Reenergizing the Economy through Sustainable Finance" February 24, 2021. The high-level speakers and experts in the areas of sustainable finance shared their insights into the concept of sustainable

finance, its role and importance in funding the Sustainable Development Goals (SDGs), ways of



rebuilding and reenergizing the economy in response to COVID-19 as well as shared the best practice examples of using sustainable finance as a guiding principle for growth, innovation and development.

### 8.17. DIU Faculty Attended as Panelist in the “Technology for Education: existing and next normal situation”

The Challenges of Online Learning and how Daffodil International University is overcoming these was presented by Mr. Ejaj-ur Rahaman Shajal, Assistant Professor, Daffodil International University at the program titled - “Technology for Education: Existing and Next Normal Situation” organized jointly by a2i and UNDP.



### 8.18. International Forum in Business Education 4.0



Daffodil International University, Bangladesh in collaboration with Camarines Sur Polytechnic Colleges, Philippines organized the International Forum in Business Education 4.0: A Webinar Series on the Challenges, Prospects and Opportunities in Offering Business Education Programs in the 4th Industrial Revolution Era on February 4 and 10, 2021.

This virtual event aims at exploring the complex issues that confronts higher educational institutions, as well as educationists in offering and teaching business education programs in the 4th Industrial revolution era particularly along challenges, prospects, as well as opportunities.

### 8.19. Seminar on "Mobile Communication in Bangladesh Challenges of the Future"

The Department of Electronics and Telecommunication Engineering, DIU in association with Mobile Telecom Operators of Bangladesh (AMTOB) organized the 3rd special seminar on "Mobile Communication in Bangladesh Challenges of the Future" on 08 February 2021.



### 8.20. Celebration of National Library Day 2021



Daffodil International University observed the National Library Day-2021 on 5 February 2021. The Vice Chancellor (In-charge), DIU; Registrar, DIU; Librarian, DIU; and other officials attended a rally to celebrate the national library day 2021. The rally was organized by DIU central library.

### 8.21. DIU Chairman Joined in the webinar on Vice-Chancellors' Forum 2 "Emerging Stronger from the Covid-19 Pandemic: The New Learning"

Dr. Md. Sabur Khan, Founder & Chairman, Daffodil International University, joined the Vice-Chancellors' Forum 2 "Emerging Stronger from the Covid-19 Pandemic: The New Learning" as a Panelist hosted By Asia e University, Malaysia on 06 February 2021.

Dr. Caroline Marian S. Enriquez, President, Our Lady of Fatima University (OLFU), Philippines & Prof Ts. Dr. Titik Khawa Abdul Rahman, Deputy VC of Asia e University, Malaysia joined the webinar where university leaders shared their first-hand experiences in mitigating the



impact of this unprecedented Covid-19 pandemic on their HEIs and the lessons learned and how they have emerged stronger to due new learning.

## 8.22. Seminar on Stand Together against Sexual Harassment



DIU follows 'Zero Tolerance' philosophy to prevent sexual harassment. Following the direction from the High Court Division, UGC and Ministry of Education, there is a strong Complaint Committee to Prevent Sexual Harassment at Daffodil International University. DIU regularly educates the students regarding prevention of Harassment. The event was organized to revive the initiatives taken by DIU to prevent the sexual harassment through our education.

Sexual harassment has an adverse effect on victim's mental health and emotional wellbeing. It is considered a chronic stressor for the victim which may lead to severe mental disorder. To know sexual harassments from psychological perspective DIU organized a live program on "The Psychology of Sexual Harassment" under the campaign "[#Stand Together against Sexual Harassment](#)". In this session, sexual harassments was discussed from the

psychological perspective of both the victim and the perpetrator. There was also discussions and directions about how to overcome these mental anxieties.

## 8.23. Seminar on 'Outbreak and Prevention of Coronavirus (COVID - 19)'

With the recent emergence of deadly Coronavirus pandemic, the Department of Public Health of Daffodil International University and Cardio Care Specialized and General Hospital organized a seminar on 'Outbreak and Prevention of Coronavirus (COVID - 19)' on 3rd March, 2020 at 71 Milonayoton of the university as part of its social responsibility. The seminar was arranged with a view to creating awareness on COVID-19 among the DIU stakeholders and through DIU to create awareness among the mass people of the country. Two renowned researchers and medical doctors presented keynote speech on COVID 19 awareness and preventions



Two renowned researchers and medical doctors presented keynote speech on COVID 19 awareness and preventions

at the seminar. Several hundred faculty members and admin of DIU participated in this program. There were also a question-answer session at the end which was very interactive and informative.

#### 8.24. DIU conducted physical lab classes maintaining all safety measures against COVID19

The physical lab classes of DIU had started with maintaining all required safety measures as directed by the University Grants Commission of Bangladesh and the Ministry of Education, Government of Bangladesh during the first quarter of 2021.



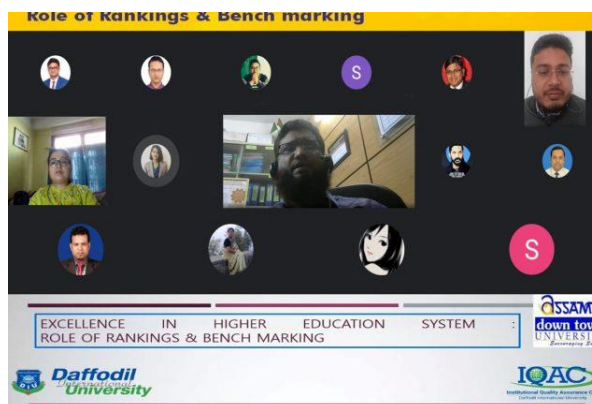
#### 8.25. DIU Students' Achievement in Int'l Student Online Chess Championship 2021



Sreedam Deb and Jahid Hasan, two students of Daffodil International University (DIU) have secured top positions in the Final Round of the International Student Online Chess Championship 2021, jointly organized by Vyatka State University, Russia and Liaoning University of Science and Technology, China for the university students around the world from May 24 to 29, 2021. Sreedam Deb, a student of CSE, became Runner-up while Jahid Hasan, a student of EEE, secured the 5th position in the competition.

#### 8.26. Webinar on “Excellence in Higher Education system: Role of Rankings & Benchmarking”

Professor Dr. A.K.M. Fazlul Haque Director, the Institutional Quality Assurance Cell (IQAC) of DIU presented the keynote paper at the webinar on “Excellence in Higher Education system: Role of Rankings & Benchmarking” organized by Assam Down Town University, India on 21 January 2021. In this webinar, about fifty participants of



different streams like students, teachers and non-academic staff took part. Director, IQAC, DIU has addressed contemporary issues relating to the diverse activities of quality assurance unit (QAU) and how it dents effect in university rankings.

### 8.27. Research Award Giving Ceremony 2021



The main objective of a university is creating knowledge. Research is the key component of a university in creating new knowledge. Daffodil International University organized 'Annual Research Award Giving Ceremony-2021' on 22 March 2021 at International Conference Hall of the university, Daffodil Smart City, Ashulia, Dhaka. Prof. Dr. Md. Sazzad Hossain, Honorable Member, University Grants Commission of Bangladesh (UGC) graced the ceremony as the Chief Guest. The

objective of the ceremony was to acknowledge the achievements in research and publications by DIU faculty, students and employees; encourage the young faculty and students to conduct more quality research activities; build a sustainable research culture at the university and to get international recognition of DIU as a research university etc.

### 8.28. DIU's Team Tigers secured 'Runner Up' with the project 'Donate Plasma' in Hack20



TeamTigers' consisting of 5 students of the Department of Software Engineering of Daffodil International University has proudly secured The 'Runner Up' position in the International Flutter Mobile Apps Hackathon with the project 'Donate Plasma'. 650 teams from all around the world competed in this gala competition and TeamTigers was declared as Runner Up winner on July 03, 2020. "Donate Plasma" is a cross-platform mobile app built with flutter for connecting COVID-19 patients and the patients recently recovered from COVID-19 willing to donate their plasma for effective treatment. DIU is proud of this achievement of the students where they used their knowledge with technology to explore the solution of the current COVID-19 pandemic.



### 8.29. Achievement of Top Position in Bangladesh by UI-Greenmetric World University Rankings-2019

Daffodil International University has achieved the top position in Bangladesh for the third consecutive year in the recently announced 'UI GreenMetric World University Rankings 2019'. It is another milestone to its continuous and sustainable global recognition initiatives. As per the rankings, the university has also achieved

second position in South Asian Region and 150th globally while University of Oxford, UK ranked second in the global list. The UI GreenMetric measures the contributions of the listed universities towards environmental sustainability through research and activities nationally and internationally.

### 8.30. Glimpses of Other Events

Various events are organized by the Daffodil International University for implementation of several SDGs round the year in collaboration with the Government, Non-government and international organizations. The following photographs are taken from a number of events.





Glimpses of Events Related to Environment and Sustainability







Examples of Events Related to Environment and Sustainability

## 9. NATIONAL AND INTERNATIONAL PARTNERSHIP FOR THE SDGS

SDG 17: Partnership for the Goals

### 9.1. Partnership with Toros Üniversitesi, Turkey to host the International Symposium on Current Approaches & New Trends in Social Sciences

Daffodil International University (DIU) co-hosted along with Toros Üniversitesi, Turkey in cooperation with 7 other international institutions from different countries to organize the International Symposium on Current Approaches & New Trends in Social Sciences (ISCANT) during 24-25 June 2021 in an online platform. More than 140 research papers were presented during this 2 days long virtual conference. Dr. Md. Sabur Khan, Founder & Chairman, DIU presented a Keynote Speech at the conference on 'Digitization and Entrepreneurship: Post Pandemic Strategies'. The symposium was very much effective and interactive for business & social science focused academicians and students to get research based information of current situation and opened a new avenue for partnership in education and research.



### 9.2. Chairman, Daffodil International University Bangladesh talked on "Educational Leadership in the Pandemic: The Changing Paradigm"

University of Cabuyao, Philippines organized Education Summit-2 with the theme "Building Educational Leadership: Thriving in Times of Change" on June 25, 2021. This summit aimed at creating research partnerships both institutionally and subject-wise. Dr. Md. Sabur Khan, Founder & Chairman, Daffodil International University Bangladesh presented a talk on "Educational Leadership in the Pandemic: The Changing Paradigm"; where educators and teachers, students from the

Southeast Asian countries joined to learn and discuss current issues affecting the field of education both in the local and international setting that would pave the way for further implementation quality of education (SDG 4).

### 9.3. DIU & VSU jointly hosted 'A Passage to Russia' Workshop



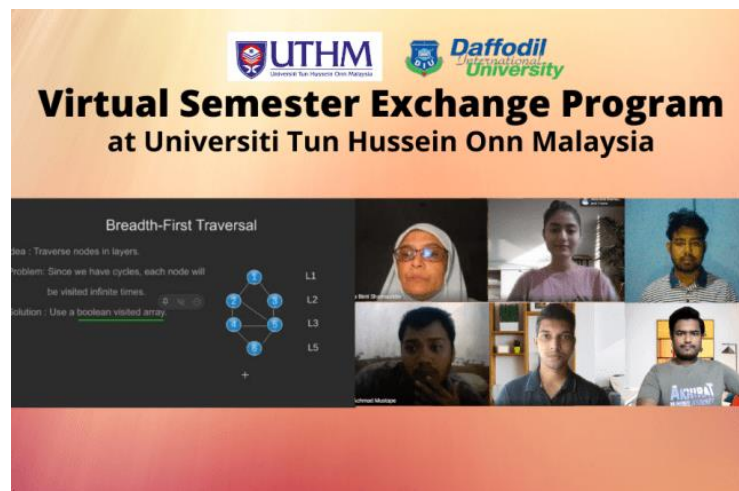
To express solidarity with the Russian partners, International Affairs of Daffodil International University (DIU), Bangladesh hosted a workshop, 'A Passage to Russia' in-Cooperation with Vyatka State University (VSU), Russia on the eve of Russia Day on 12 June, 2021. The workshop included different sessions by the session facilitators from VSU.

The speakers shared their living experience, cultural barriers, and hospitality to build awareness of the cultural norms of Russia.

More than one hundred students and academicians from both the universities joined the workshop to enhance ability to deal across cultures, to break cultural barriers, and to build awareness of the cultural norms of Russia. The day is for all Russian to demonstrate their national pride and glory.

### 9.4. DIU Students Join Virtual Semester Exchange Program at UTHM Malaysia

A group of four DIU students from the Dept. of Business Administration, Electrical and Electronics Engineering, Computer Science and Engineering have completed a Virtual Semester Exchange Program organized by Universiti Tun Hussein Onn Malaysia (UTHM) for Spring-2021 semester. They took their departmental courses offered by UTHM and completed three credits each. DIU's students are becoming part of the international community and having invaluable access to a wide range of cultures, faiths, languages, and perspectives. This type of partnership with international community ensures and facilitates the implementation of SDG 17: partnership for the goals.



### 9.5. His Excellency, Dr. Banshidhar Mishra, Honorable Ambassador, Embassy of Nepal in Bangladesh visits Daffodil International University



His Excellency, Dr. Banshidhar Mishra, Honorable Ambassador, Embassy of Nepal in Bangladesh visited Daffodil International University, Daffodil Smart City, Ashulia, Dhaka on January 28, 2021. The Ambassador visited DIU and had fruitful interactions with DIU management regarding possible partnership and collaboration for Nepalese students' higher education opportunities at DIU.

### 9.6. Rotaract Club, DIU joined District Training Assembly (DTA) "Falcon - 21"

Rotaract Club, DIU joined District Training Assembly (DTA) "Falcon - 21" at National Scout Training Center, Mouchak, Gazipur, where more than 550 Rotarctors of RID 3281 were present. The annual district assembly is the major leadership training event in each Rotary District of the world. The workshops offered motivation, inspiration, updated Rotaract information, and new ideas for club officers, directors, and key committee chairmen of each club. Some of the most experienced district leaders conducted informative discussions on all phases of Rotaract administration and service projects.



### 9.7. DIU Cultural Club and All Stars Daffodil participated in the "Culture Race-2021"

FPT University, Vietnam organized an online exchange event called the 'Culture Race' on 26 June 2021 where 5 students of DIU actively participated with students from Thailand, Indonesia, Vietnam, and India as a part of the International Cultural Exchange Program. The team 'Locolo' achieved the 'Best Performing Team' award where 2 DIU students proved their best.

This event was to create a space for students to make friends and learn about the different cultures despite the distance amidst the pandemic. There were segments to present cross-cultural; presentations by groups such as Twisty Tongue & E-Talent Show. In this event, 3 DIU students from 'DIU Cultural Club' and 2 students from 'All Stars Daffodil' joined to represent Bangladeshi culture, costume and performances.

## 9.8. Partnership with DCCI- largest private sector representative in Bangladesh

Daffodil International University (DIU) and Dhaka Chamber of Commerce & Industry (DCCI) have signed a Memorandum of Understanding (MoU) to foster and ensure industry-academia partnership and collaboration.



The objectives of the MoU are: working together between universities and private sectors to convert the country's youth population into skilled human capital; accelerating development to achieve the fourth industrial revolution (4IR); working to arrange internationally accredited skills development training in the country for continuous re-skilling and up-skilling programs; conducting research and innovative programs to offer high quality post-graduation education and training; ensuring a sustainable and commercially viable research ecosystem, etc.

## Daily INDUSTRY DIU signs MoU with Memorial University New found land of Canada

**Industry desk:** Memorial University of Newfoundland (MUN) of Canada and Daffodil International University (DIU), Bangladesh signed a Memorandum of Understanding (MoU) with the purpose of exchanging students of undergraduate & graduate and faculty members as well as joint



High officials of Memorial University of Newfoundland (MUN) of Canada and Daffodil International University (DIU), Bangladesh are in a virtual Meeting regarding Signing MoU on short term study, research, credit transfer, full time study opportunities in Canada or in Bangladesh

programs. Dr. Mark Abrahams Provost and Vice-President (Academic), MUN & Professor Dr. S. M. Mahbub Ul Haque Majumder, Acting Vice-Chancellor of Daffodil International University have signed the agreement on behalf of their respective organizations. Under this agreement students of both universities will get short term study, research, credit transfer and full time study opportunities in Canada or in Bangladesh. Memorial University of Newfoundland (MUN) is one of the leading public universities in Canada having more than 19,000 students from over 115 countries. MUN is also a premium destination for Bangladeshi students for its advanced technology, research, internationalization, startup & entrepreneurial culture.

## 9.9. Partnership with Memorial University of Newfoundland (MUN), Canada

Memorial University of Newfoundland (MUN), Canada & Daffodil International University (DIU) signed a Memorandum of Understanding (MoU) with the purpose of exchanging students of undergraduate & graduate and faculty members as well as joint programs.

### 9.10. DIU Joined EURIE-2021 as an Exhibitor

Daffodil International University (DIU), Bangladesh joined the 6th EURIE- Eurasian Higher Education Summit- 2021 as an Exhibitor. Due to the pandemic, annual EURIE Summit was organized on 3-5 March 2021 in a virtual platform. EURIE Summit 2021 featured a virtual expo for networking, and a conference dedicated to current issues in internationalization and higher education management with numerous panels, seminars and keynote speeches.

More: <https://eurieeducationsummit.com>



### 9.11. Partnership with Rostov State University of Economics (RSUE), Russia



Daffodil International University (DIU) signed a memorandum of understanding (MoU) with Rostov State University of Economics (RSUE), Russia. Due to pandemic the signing was held separately at the respective university where Prof. Dr. Elena Makarenko, Rector of RSUE signed from the RSUE part and Prof. Dr. S. M. Mahub Ul Haque Majumder, Vice-Chancellor (Acting), DIU signed from DIU part. According to the MoU, from now both university will arrange and develop specific programs of co-operation like: Faculty and Students Program, Joint research collaboration, resource sharing, jointly organizing summer and winter camp etc.



### 9.12. Agreement with Eastern European University Association (EEUA)

Daffodil International University (DIU) signed a Membership Agreement with Eastern European University Association (EEUA) with a view to fostering collaborative activities between DIU and EEUA such as be knowledge and resource sharing, international

conferences, global meetings, joint workshops and fairs around the world, initiating university partnerships and projects.

The EEUA is an international association of the universities founded in 2010, and aims at developing international education and facilitating internationalization (13 Dec 2020)

### 9.13. Collaboration with Global Entrepreneurship Research Network and Startup Nations



Daffodil International University in association with Global Entrepreneurship Research Network and Startup Nations hosted a Policy Dialogue Session on "Ways to support Entrepreneurs during Crisis and Driving Economic Recovery" on 11 December 2020. The session was attended by some of the most influential leaders of the national and global startup ecosystem to leverage

the points of the Startup ecosystem and driving economic recovery.

The key speakers of the session were Mr. Zunaid Ahmed Palak, Hon'ble State Minister, ICT Division, Bangladesh; Dr. Kelly Shaver, President, Entrepreneurship Mindcett LLC.; Ms. Mohsina Yasmin, Executive Member (Additional Secretary), BIDA; Cristina Fernandez, Vice President of Policy and Research, GEN; and Dr. Md. Sabur Khan, Chairman, Daffodil Family & DIU.

### 9.14. Daffodil International University hosts two-day 'Virtual Social Business Students' Forum 2020'

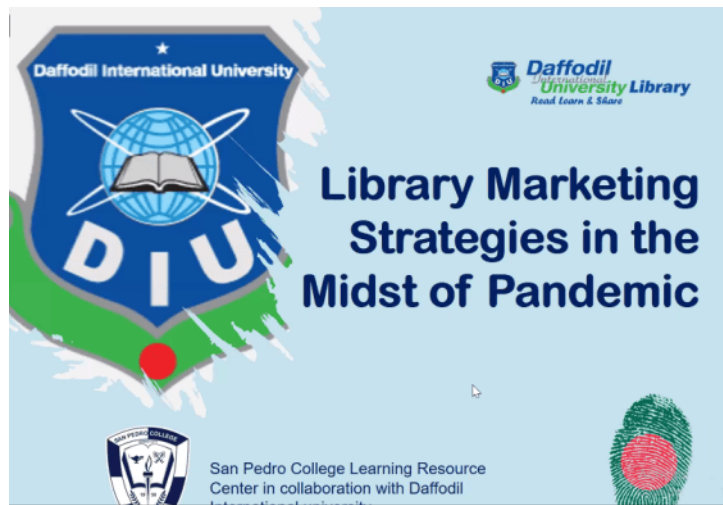


The Virtual Social Business Students' Forum 2020 organized by Social Business Students' Forum (SBSF) & Daffodil International University (DIU), in cooperation with Eurasian Universities Union (EURAS) and Eastern European University Association had been successfully held from November 25 to 26, 2020; with the motto of bridging the young minds in zeroing poverty, unemployment and net carbon emissions. Around 200 International participants from 36 Universities and 23

Countries have virtually joined this blended program. This is an excellent example of regional and

international collaborations in higher education sector. On this forum, Professor Muhammad Yunus, Nobel Peace Laureate-2006 delivered Keynote speech entitled 'Role of students zeroing poverty, unemployment and net carbon emissions'. In the speech he urged young minds to come forward zeroing wealth concentration alongside zeroing poverty, unemployment & net carbon emissions.

### 9.15. Collaboration with San Pedro College Learning Resource Center on Library Resource Sharing



Dr. Md. Milan Khan, Librarian and Head, Dept. of Information Science and Library Management, Daffodil International University has recently been one of the guest speakers of the webinar on Library Services Amidst Pandemic organized by Learning Resource Center, San Pedro College, Philippines on 18 September 2020. As a guest speaker, he has talked about Library Marketing Strategies in the Midst of Pandemic, e-tools impacts of library promotion and highlighted Library promotion activities of DIU. The

webinar was organized with a view to unfolding the best practices of International Librarians and Learning Resource Centers experts from Indonesia, Philippines & Bangladesh. Around two hundred participants have joined the webinar and gathered ideas of Library Marketing by the earnest sessions of the library practitioners.

### 9.16. Partnership with Universities from Kuwait and Palestine on "Online and Digital Education in Bangladesh and at the Arab World"

Daffodil International University in association with Kuwait University, Kuwait and An-Najah National University, Palestine organized a webinar on Online and Digital Education in Bangladesh and at the Arab World on May 27, 2021.



Dr. Fayiz Aldhafeeri, Professor of Learning Technologies, Training & Development and Director of Educational Training Center, Kuwait University, Kuwait and Dr. Saida Affouneh, Dean, Faculty of



Education & Teacher Training, Founder; Director of E-Learning Center, An-Najah National University, Palestine and Dr. Md. Sabur Khan, Chairman, Daffodil International University, Bangladesh were present as the key discussants from the partnering universities.

Dr. Md. Aktaruzzaman, Director, Blended Learning Center, Daffodil International University, Bangladesh played the role as the Session Reactor and Ms. Samiha Khan, Lecturer, Department of Development Studies, Daffodil International University, Bangladesh moderated the entire session.

### 9.17. DIU Chairman Delivered Keynote at International Symposium on Current Approaches & New Trends in Social Sciences (ISCANT)

The poster for the International Symposium on Current Approaches & New Trends in Social Sciences (ISCANT) 2021, held on June 24-25, 2021. It features six speakers: Dr. Irina PEDKO (Odessa State Academy of Civil Engineering and Architecture), Dr. Anastasiya PANDAS (Odessa State Academy of Civil Engineering and Architecture), Dr. Durrishah IDRUS (Universiti Teknologi Malaysia (UTM) Razak Faculty of Technology and Informatics), Dr. Md. Sabur KHAN (Daffodil International University), Phil CLEMENTS (CEO and Director of the International Education Network Ltd. (IEN) Global Centre for Professional Events Management Ltd. (GCPME) and Argentinum Moon Events), and Dr. Mohamed ABDEL-MAGUID (Pro Vice-Chancellor, Canterbury Christ Church University). The poster also includes important dates, publication opportunities, the website www.iscant.com, and logos of partner institutions like UTM, Daffodil University, and others.

International Symposium on Current Approaches & New Trends in Social Sciences (ISCANT) was held in an online platform on June 24-25, 2021 hosted by Toros Üniversitesi, Turkey in cooperation with Daffodil International University (DIU) and six other international institutions from different countries.

Dr. Md. Sabur Khan, Founder & Chairman, delivered the Keynote Speech at the conference. His topic was 'Digitization and Entrepreneurship: Post Pandemic Strategies'.

At this symposium, papers in all fields of social sciences and humanities were included. All accepted papers were published in the Symposium Proceedings Abstract E-Book with ISBN number and selected full papers had been published in the following journals after the peer-review process:

- Australian Journal of Business and Management Research
- Toros University Journal of Social Sciences
- International Journal of Commerce, Industry and Entrepreneurship Studies.

### 9.18. Collaboration with the Association of Universities of Asia and the Pacific (AUAP)



Association of Universities of Asia and the Pacific (AUAP) recently announced the name of the members of its different committees. Five academic and non-academic staff from Daffodil International University (DIU), Bangladesh have been appointed by the AUAP secretariat as the members of newly formed committees.

Dr. Md. Sabur Khan, Founder & Chairman, DIU as well as the First Vice President of AUAP has been elected as the Chairman while Prof. Dr. Md. Kabirul Islam, Director, and Mr. Mohammad Monir Hossain, Senior AD, Division of Research, DIU as the members of Research and Innovation Committee (RIC). Besides, Prof. Dr. AKM Fazlul Haque, Director, IQAC, DIU and Kazi Mesbah Ur Rahman, Officer, DIU have been appointed as the member of Quality assurance committee and country chapter committee respectively.

### 9.19. Regional Partnership: Virtual Youth Symposium on Mitigating Waste Management and Net Carbon Emissions

Virtual Youth Symposium on Mitigating Waste Management and Net Carbon Emissions was jointly organized by Social Business Students' Forum (SBSF), Bangladesh BD, and Nexense Social Business Club (NSBC), Belgium BE with the support of International Affairs, DIU.



After providing quality inputs through panel discussions of two major issues delivered by the local and foreign speakers- Fahim Uddin Shuvo, Founder and Managing Director, GARBAGEMAN, Bangladesh & Jérôme Meessen, International Expert, Energy & Climate Change Consultant at Climact,

Belgium, the discussions ended with Question & Answering Sessions. The discussants from Bangladesh and Belgium who have been in the chair of panel discussions circulated in advancing discussions on "Sustainable Process of Waste Treatment" and "Race to Reach Zero Net Carbon Emissions" from the perspectives of respective countries. The symposium was attended by more than a hundred participants from Bangladesh, Belgium, and other different countries along with organizers of this program.

## 9.20. Partnership with SDGs HelpDesk



Daffodil International University (DIU) is now a well-pleased partner of Sustainable Development Goals (SDGs) Helpdesk, in the category of Think Tanks and Academia. The helpdesk activities are available at <https://sdghelpdesk.unescap.org/.../daffodil...> As per commitment, DIU and SDG Helpdesk have shared their reciprocated executions of sustainability practices, and have agreed on providing support for SDG practitioners in the prominent fields. Through this collaboration, SDG practitioners from DIU have got the opportunity to access the online community of experts for SDG implementations. SDG enthusiasts of our university are invited to join this network for SDG community practices: <https://sdg-cop.unescap.org/feed>

## 9.21. Joint project: 'Working Across Borders' project hosted by UC Leuven-Limburg, Belgium

A group of 17 students and 2 faculty members from the Faculty of Business and Entrepreneurship, Daffodil International University (DIU) joined the 'Working Across Borders' project hosted by UC Leuven-Limburg, Belgium.



## 9.22. DIU Chairman conducted a master class on "Entrepreneurship in Action" at Jagran Lakecity University in India



Dr Md Sabur Khan, chairman, Board of Trustees, Daffodil International University (DIU), conducted a master class on "Entrepreneurship in Action" at Jagran Lakecity University in India on October 10 through a webinar.

The webinar was moderated by Prof Diwakar Shukla, Dean, Faculty of Journalism and Creative Studies JLU, India.

During the class Dr. Sabur Khan inspired the students wished to be entrepreneurs and urged to have the qualities of risk management, patience, skill development, foresight, perseverance in achieving goals. At the same time, one must have knowledge about technology because it is impossible to be an entrepreneur during the pandemic without proficiency in it.

Referring to DIU as an entrepreneurial university, its chairman also pointed out that the university has many initiatives to develop students as entrepreneurs: like Innovation and Entrepreneurship Department, Employable 360 Degree Course, Start Up Market, Venture Capital, ISBSP, Get in the Ring Competition, Are You the Next Start Up Competition, etc.

### 9.23. Engaging youth for initiating world peace through peace dialogue: Daffodil International Model UN 2020



Engaging youth in peace initiative, an important area for United Nations and Bangladesh, keeping that in priority a four-day long international model UN conference was organized by Daffodil International University (DIU) Model UN Association in association with United Nations Bangladesh and knowledge support by UNIC Dhaka during 02 to 05 January 2020 at the University campus. More than 250 delegates

from different educational institutions and a number of guests from different organizations took part in the MUN conference.

Mr. Mahmud Hasan, Additional Secretary, Ministry of Environment, Forest and Climate Change inaugurated the conference as the Chief Guest while Professor Dr. S M Mahbub Ul Haque Majumder, Pro Vice Chancellor of DIU present as the guest of honor.

## 10. TRANSPORTATION



Transportation is a major issue to both students and staff. Realizing the needs for the students, DIU has introduced around 50 buses to their transport pool which are exclusively used for our students/faculty/admin staff. A dedicated Car and an ambulance are also available for the students and their parents. Total transportation system is managed from the Ashulia campus. All the transports (buses) are moving to different routes and campuses from Ashulia Campus for transportation of the students. Students are required to show their ID cards for getting this facility. It saves both time money and traveling hassle in a public bus. Particularly this service is very helpful for the female students. They can easily escape from the unavoidable circumstances or any types of unpleasant situations in the public transports.

### Facilities inside the Buses:

- CCTV Camera
- Fire Extinguishers
- First Aid Box
- Air conditioner
- Excellent seats and safety belt

### Benefits of Using University Transport

- Always on time
- Safe and time saving
- Better Environment
- Reduce traffic
- Reduce pollution
- It can teach time management
- Money saver

### 10.1. Shuttle Bus service for students



### 10.2. Shuttle service routes:



## 11. ENERGY AND SUSTAINABLE INFRASTRUCTURE

Daffodil International University has been striving to produce renewable energy inside the campus. The following are the initiatives taken:

1. Biogas plant
2. City campus Rooftop Solar Panel installed with 1.2 KW capacity
3. Ashulia campus Rooftop Solar Panel installed with 1.5 KW capacity
4. The wind turbine will be placed in the east and west verandah facing south, power generation will be around 0.1 M watt.
5. The university is going to install solar panel in the entire 10,000 meter square rooftop of the new academic building 4.



Solar panel at the roof top of Academic building 3 and 4 at Ashulia campus (Rooftop Solar Panel used for using 2000 KWH power annually)



Example of Biogas plant (Daffodil International University)



Planned Wind Turbine, Daffodil International University





City campus rooftop Solar Panel used for using 1500 KWH power annually

Solar panel energy grid

The Department of Nutrition and Food Engineering of Daffodil International University has been using the Multi-Commodity Solar Tunnel Dryer (MCSTD) technology for drying the food items with the solar panel without using the electricity. This is contributing towards reducing electricity consumption and directly impacting on environmental sustainability.



The Automatic Fire Alarm Sensor System and direct sun light and natural ventilation in classroom



Sensor-based LED lighting system in the buildings



Finger print-based, password protected and Face recognition locker system for students



Fingering system for daily attendance and access into the university



Fire Extinguisher along with Instructions to be followed (in local language) during fire and other accidents



Exit indication and audio speaker for use during any fire and accidental moment



Fire balls are placed in suitable places



Firefighting tools in the building



Card Touch and go system for access in the campus buildings Central Monitoring and Surveillance Centre in the Building

## 12. WASTE MANAGEMENT

### 12.1. Inorganic Waste Management Project

The Department of Environmental Science and Disaster Management of Daffodil International University has been working on the web based project for inorganic waste management. They have developed a website namely ‘Safe the Environment’ (<https://safeenvironment.github.io/>) and with the help of web based application, it is working to ensure inorganic waste management.



Fig. 1. Ongoing Web based Project for Inorganic Waste Management

### 12.2. Organic Waste Management

**Methodology:** This research has systematic procedures to follow. The overall process is being illustrated below-

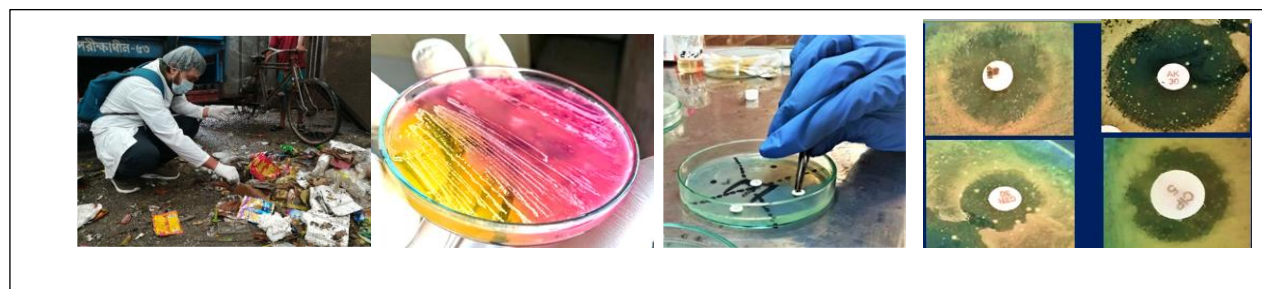


Fig. Sample collection from the sampling sites and work in research lab.

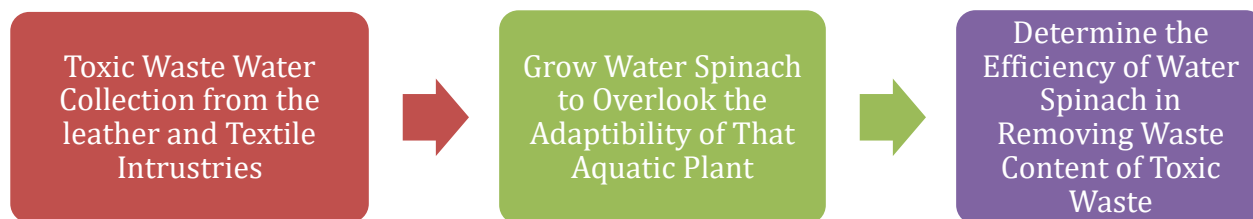
### 12.3. Water Spinach Utilization as a Phytoremediation Technique for Toxic Waste Management

**Background:** The present state of toxic waste management system in Bangladesh is not in a good condition. There is lack of proper management of toxic waste in different industries such as leather, textile, chemical and others industries which contain heavy metals. It has harmful effects on environment and human health. Waste water treatment cost is very high and it's a long time process. The waste water which have heavy metals that modify the cells of living organic substances, soil, water bodies and human body too. So, untreated waste water is a great problem for us and for the environment. If it remains untreated then it will become a great threat for the human race. The waste water can be treated with phytoremediation which is a process where plants are used to treat water and it is also very cost effective way to manage toxic waste.

#### Objective:

- To manage the toxic waste coming from the industries.
- To find out feasibility of water spinach in toxic waste water.
- To find out the level of toxic content removed by the plants.

**Methodology:** This research has systematic procedures to follow. The overall process is being illustrated below-



**Fig: Adaptability Measures of Water Spinach in Textile and Leather Waste Water**

#### Research Outcome:

- Water Spinach successfully survived in the textile toxic waste water for one month.
- Water Spinach could not survive in high leather toxic effluent for 2 days.
- A huge amount of contaminant and pollutant removed by phytoremediation.

## 13. WATER CONSERVATION AND SUSTAINABLE CONSUMPTION

### 13.1. Water Body Restoration and Quality Development

The permanent campus of Daffodil International University (DIU) at Ashulia is a phenomenal natural beauty and an art of perfect green entity. There is a water body adjacent to the campus which somehow restricts the flourishing visuals and environmental aspects. The place is posing impediments to study in a healthy environment, to the current as well as future students who will be belonging to the under construction female halls nearby. It is therefore a crying need to work on the problem. Following is the description of the present state as well as an improvement plan for the place.

**Pre-Condition:** The water body is located at the permanent campus of DIU at North to the 'Shadhinota Shommelon Kendro', DIU. The approximate position is 23°87' N and 90°32' E. The concerned area is approximately 7.961 Acres, as estimated by the Civil Engineering Department of DIU. Aerial image has been captured to delineate the location and the shape of the concerned place.



Fig. 1. The proposed Area for Existing Water Body Restoration.

The targeted area has been marked with Red and Yellow color. Numbering has been done to link with the following pictures in order to understand the place better. Some glimpses of the place is shown below-





**Fig. 2.** Pre-Condition at Targeted Area

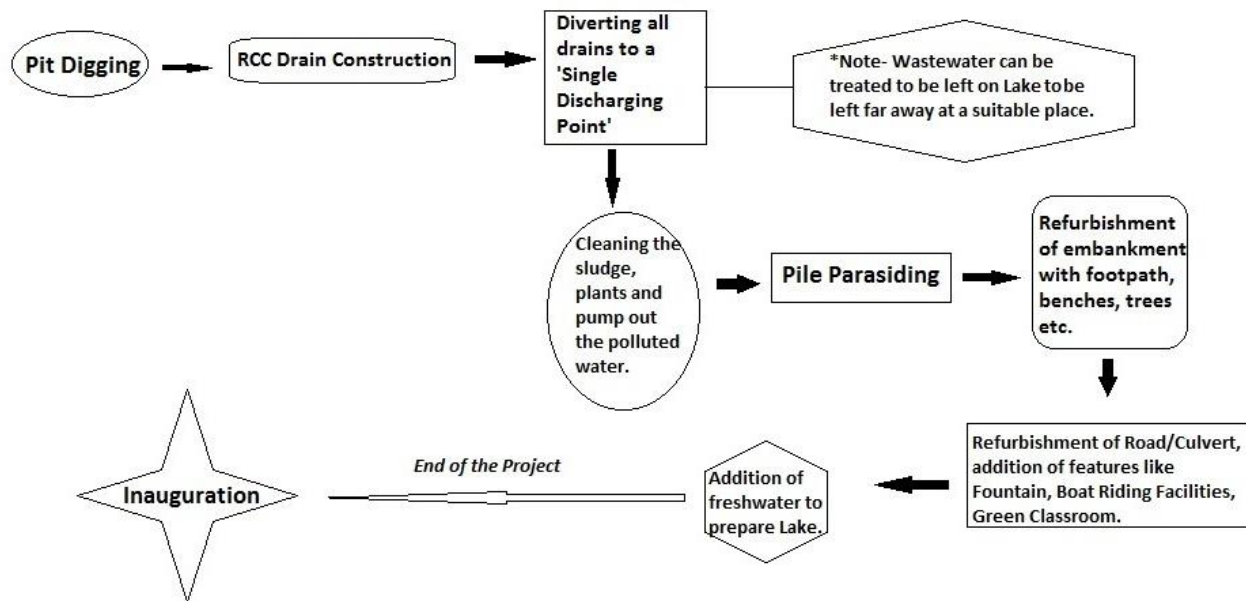
**Improvement Plan:** The improvement plan has been designed through a drawing which has been uploaded to the google drive. The content is viewable by clicking [here](#) online. For hard copies of the report, the design has been attached.

According to the design, plans have been set part by part. A secondary management plan has been proposed. Firstly, the main focus is to take care of the effluents that are being discharged from nearby industries and local villagers. For that, **Pit** will be dug below the discharging points of the pipes. Then following the pit, **Reinforced Cement Concrete (RCC) drain** would be built as shown with Cross-Section in the design. All the drains around would meet at a single point as shown in the design. After the construction of RCC drain, the pipes would be cut short so that the effluents can fall in pit and be directed towards the **Single Discharging Point**. That point can be extended to leave the wastewater at a suitable place or a treatment plant can be established to treat the wastewater and leave back as treated water to the lake.

After taking care of the effluent by diverting them, the next focus would be on the existing water body. So, the hyacinths and aquatic plants should be removed. Then the existing polluted water should be pumped out. Lime can be used to clean the water. Afterwards, the attention would be on the stability of the Lake's embankment. And for that, the proposal is for **Pile Parasiding**, almost 5 feet away from the existing embankment. Piled structure would shape the Lake. Then the embankment can be made ready by sand and clay filling. Later on, footpath can be added, a cross section of that has been added in the design. Some features like Fountain, Boat Riding Facilities, and Green Classroom have been added as well. Green classroom has been proposed to be under the Environmental Science and Disaster Management (ESDM) department, it will be powered by 'Green Energies' like Solar/Bio, and would be used as recreational and counselling purposes besides studies. In case of the road, it can be refurbished and the culvert can be extended as well as beautified. Lastly, Freshwater would be added

to the Lake. The place can then be inaugurated as an amusement park or other suitable title. A work flowchart has been added -

The budget of the project can be precise after necessary surveys and measurements by the engineers.



The proposal has been made to offer the feasibility with the least possible amount. For example, an alternative of pile parasiding would be 'RCC Retention Wall Construction'. But that would greatly increase the costing.



Fig. 3. Post-Condition at the targeted area

**Conclusion:** To reiterate, the water body is not conducive to the studios as well as healthy environment. The operation of the university with a purpose to serve the students with good quality environment, is being interrupted due to the polluted water. If immediate measures aren't taken now, the place might have more negative impacts in the long run, in terms of human health and environment. So, an improvement is urgent for now.

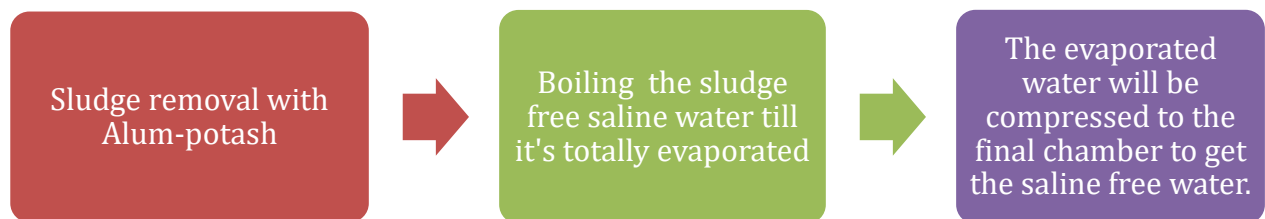
### 13.2. Home Scale Desalination Plant Design and Development

The present condition of drinking water for the people of coastal area is very much weak and unavailable at most of the coastal area. This research can bring a very handy solution for the people of coastal area who are suffering from premature miscarriage, malnutrition, skin diseases & so on. This research can be used to develop a home scale desalination plant to treat the saline water through sublimation process.

#### Objective:

- To create a device or home scale plant to treat saline water
- To get salt from the saline water as a byproduct.
- To provide a handy and effective solution for the coastal people about fresh drinking water in a very low cost

**Methodology:** This research has systematic procedures to follow. The overall process is being illustrated below-



**Fig. 1.** Project demonstrated in competitive project exhibition

#### Research Outcome:

- About 70-80% fresh water can be produced from the total amount of saline water.
- 1-20% of salt can be collected as a byproduct from the plant.
- Handy and affordable.



### 13.3. Water Absorption Initiatives



Water absorption in DIU Pond and Lake



Recycled Water is used in DIU water fountain



Recycled water re-used for watering the plants



Preserved Rain water is used for water fountain



Preserved Rain water is used for fish cultivation

## 14. PLASTIC RECYCLING & REUSING

### 14.1. Plantation on Plastic Bottle

The Department of Environmental Science and Disaster Management (ESDM) always had a passion to protect the environment. From this passion, they want to know how the environment can be protected from pollution. After knowing this term, they thought about a plan by which we can clean our whole surroundings, can reduce environmental pollution and also can run a small business from which they can make some money. This business is a recycling or reusing business with a mid-term plan of going into full-scale recycling or reusing of some recyclable or reusable items, mainly plastics, and other (e.g. paper, metal, rubber, glass, etc), and a long term plan of converting waste to reusable products.

Plastic waste is arguably one of the most common forms of waste on this planet. Waste plastic such as plastic bottles, used plastic tins and containers, and shopping bags can be reused and formed into an amazing range of new and reusable products. According to the ESDO, 73,000 tons of plastic wastes end up in the Bay of Bengal every day through the GBM Basin of Bangladesh. A study report has done by the Ministry of Environment, Forest and Climate Change under the Department of Environment, Bangladesh, stated that plastic waste is 60% of the total waste found in the coastline, and most of the plastic waste is plastic bottles.

#### Objective:

- To reuse and recycle plastic wastes and other waste that are harmful to nature
- To aware people on the creative use of plastic and other wastes
- To create a business model for the community which is eco-friendly and sustainable

#### Methodology:

Anyone who is environmentally conscious, will know how important it is to reuse or recycle as much of our trash as we can. When we are done with that plastic drink bottle, we should not just throw it away, use it to make something awesome! Of course, we could just put it in with the rest of our recycling, but making something new out of our old bottles is much more fun, plus we could save ourselves some money by crafting something we need instead of having to go out and buy it. Take a look at these creative ideas for reusing bottles.

Instead of buying a can, glass, or ceramic pencil holder, simply recycle the old plastic bottles that you have at home. Ones with the widest circumference will do so that you can place as many pencils or pens as possible. Use a rubber lining on top and make it as plain or as colorfully designed as you'd like it to be. An easier way to create an organizer using plastic bottles is to cut the bottom part and place them alongside each other on your desk. You can use the containers to store pens, clips, wires, pins, stapler wires, and other office supplies.



**Fig. 1.** Reuse of Plastic Jar and Bottle for Plantation

**Outcome:**

- Starting up a recycling plant also contributes to the economy, concerning taxes, conservation of power consumption, local content creation, small and medium scale development, job creation, and wealth distribution. 1-20% of salt can be collected as a byproduct of the plant.
- For instance, the money saved through the consumption of less energy means more competitive price of goods. The production cycle can be greatly decreased. Taking paper as an instance, the whole wood growth time lag is removed from the producing process
- As a green entrepreneur or owner of an eco-conscious company, one can also contributing the quota in the movement for environmental protection because that A little company young people established will help to curtail many problems.



**Fig. 2.** Reuse of Plastic Bottle and Jar for Plantation

## 14.2. Plastic re-use and Reducing the Use of Plastic Products



Waste bin prepared with used plastic bottle



Mini plastic house model prepared with used plastic



Sitting Tool prepared with used plastic bottle



Jute bag used as Convocation kit (reducing the use of plastic products)

## 15. CONCLUSION

Daffodil International University is recognized as an environment-friendly university with having the largest green campus amongst the private universities in Bangladesh. All of its existing development initiatives and future plans put highest priority to the climate change, environment issue and sustainability. The mission of the university is somewhat aligned with the importance of SDGs: *“To positively influence and enhance the lives of people by promoting research that is aligned with national development agenda, Millennium Development Goals (MDGs), Sustainable Development Goals (SDGs), innovation and entrepreneurship.”* (<https://daffodilvarsity.edu.bd/article/strategy>)

This sustainability report of Daffodil International University strives to identify the strengths, opportunities and limitations of the university which remained undetected in the past. The report also acts as a catalyst to inform the management regarding the prospects and threats of the organization in the long run.

DIU is committed to pay close consideration to the issue of environmental changes and recognize the significance of the progressions it is seeing for the future of the Daffodil Family and rest of the world. DIU's continued endeavor will be to manage new difficulties and to ensure its progression giving highest priority to the environmental wellbeing and sustainability of the eco-system of the earth. The university will impose importance on collaborations with the partner institutions, government and non-government bodies, nearby networks and will present real scenario of the sustainability and environment-friendly practices of the university in the yearly report on sustainability.