SUSTAINABLE DEVELOPMENT GOAL

13

CLIMATE ACTION

UNIVERSITY OF DHAKA

Sustainability Progress Report 2025

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SDG 13: Climate Action

1. Executive Summary

Climate change presents significant challenges for Bangladesh, including rising temperatures, extreme weather events, coastal vulnerability, flooding, and environmental degradation. Universities have an important role in responding to these challenges through research, education, institutional governance, technological innovation, and practical environmental management.

In 2025, the University of Dhaka (DU) advanced its contribution to Sustainable Development Goal 13 (Climate Action) through a combination of institutional environmental policies, campus-level interventions, academic research, international collaboration, and disaster resilience initiatives. The university's approach connected administrative leadership with practical environmental management and academic engagement.

A major feature of the university's climate action agenda was the strengthening of environmental governance. The administration maintained its commitment to a Clean Campus, Green Campus, Pollution-Free Campus, and Bird-Friendly Campus. Its prohibition of fireworks, firecrackers, and sky lanterns during major celebrations received national recognition from the Ministry of Environment, Forest and Climate Change in December 2025. The university also launched the *Stop Burning Fallen Leaves* campaign, encouraging residential halls to replace open burning with organic waste collection and composting.

Alongside these policy measures, the university introduced practical interventions to promote sustainable campus operations. These included bicycle parking facilities with a combined capacity of 150 bicycles, installation of 112 energy-efficient ceiling fans at Amar Ekushey Hall, and the conversion of collected fallen leaves into organic fertilizer at Kabi Jasim Uddin Hall. The university also advanced plans for a major campus development programme that includes restoration of four water bodies, modernized drainage and waste management systems, and improvements to residential and academic infrastructure. These planned investments have the potential to strengthen the campus's long-term climate resilience.

The university's academic contribution was equally important. Through the Energy Institute, DU organized technical seminars on microbial fuel cell technology and solar-cell modelling. Other academic activities addressed climate change in foreign policy, climate-induced migration, community participation in sustainable development, and disaster preparedness. International partnerships and discussions with institutions such as the Japan International Cooperation Agency (JICA), Peking University, and Central Queensland University further expanded opportunities for collaboration in environmental management, renewable energy, and coastal disaster resilience.

Overall, the university's 2025 activities demonstrate progress in connecting climate-related research, institutional policy, and campus operations. However, the available records do not provide quantified data on greenhouse gas emissions, energy savings, renewable energy generation, carbon sequestration, or climate-risk reduction. Establishing measurable indicators

and a regular climate reporting system will therefore be important for assessing the long-term impact of these initiatives.

2. Institutional Approach to Climate Action

2.1 Climate action as an institutional responsibility

The University of Dhaka recognizes that climate action extends beyond academic research and environmental awareness. As a large public university operating within a densely populated urban environment, it has a responsibility to manage its own environmental footprint while contributing to broader national and international climate efforts.

In 2025, the university's environmental agenda was guided by the leadership of the Vice-Chancellor of the University of Dhaka. The administration emphasized a campus-wide approach that connected environmental policy with practical action across academic buildings, residential halls, public spaces, and university facilities.

Four institutional priorities provided a broad framework for this approach:

- Clean Campus
- Green Campus
- Pollution-Free Campus
- Bird-Friendly Campus

These priorities translated into practical measures covering pollution prevention, organic waste management, energy efficiency, sustainable transportation, ecological conservation, and climate resilience.

The university also sought to connect its institutional initiatives with national and international development priorities. Engagement with government agencies, international development partners, research institutions, and academic departments helped broaden the scope of its climate action activities.

2.2 Alignment with SDG 13 targets

The university's reported activities in 2025 were particularly relevant to the following SDG 13 targets:

SDG 13 target	Relevant University of Dhaka initiatives
13.1 – Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters	Coastal disaster management research, disaster preparedness conferences, international collaboration, and climate-resilient infrastructure planning.
13.2 – Integrate climate change measures into policies, strategies and planning	Campus environmental policies, pollution-control measures, renewable energy discussions, and the Master Development Plan.

13.3 – Improve education, awareness and institutional capacity on climate change	Academic seminars, renewable energy research workshops, community participation discussions, and coastal climate education partnerships.

The activities also contribute to related SDGs, particularly SDG 7 (Affordable and Clean Energy), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), and SDG 15 (Life on Land).

3. Environmental Governance and Institutional Climate Policy

3.1 Strengthening environmental responsibility through institutional policy

Effective climate action requires more than individual environmental activities. It depends on institutional rules, administrative commitment, and consistent implementation. During 2025, the University of Dhaka continued to strengthen its environmental governance by translating its sustainability priorities into campus-wide operational directives.

The university's environmental framework emphasized pollution prevention, protection of campus greenery and biodiversity, responsible waste management, and the promotion of environmentally responsible behaviour among students, staff, and visitors.

This approach was particularly visible in the university's restrictions on environmentally harmful celebratory activities and its campaign against open burning of fallen leaves.

3.2 National recognition for the prohibition of fireworks and sky lanterns

On 18 December 2025, the University of Dhaka received a special national honour and crest from the Ministry of Environment, Forest and Climate Change. The recognition was presented at a formal ceremony held at the Department of Environment's conference room.

The award acknowledged the university's environmental leadership, particularly its policy introduced in December 2024 prohibiting fireworks, firecrackers, and sky lanterns across the campus during Thirty-First Night and major holiday celebrations.

The policy addresses several environmental and public safety concerns. Fireworks and firecrackers can contribute to localized air and noise pollution, while combustion releases chemical residues that may affect surrounding soil, vegetation, and water bodies. Sky lanterns can create fire hazards and pose risks to birds and other campus wildlife.

By restricting these activities, the university established an institutional standard for environmentally responsible public celebrations within its campus.

The national recognition in 2025 was significant because it demonstrated that a university-level environmental policy could receive acknowledgement from a national government authority. It also strengthened the university's position as an institutional example of pollution prevention and responsible urban environmental governance.

Importantly, the underlying prohibition was introduced in December 2024; the achievement recorded for 2025 was the Ministry's formal recognition of that policy.

3.3 International engagement for sustainable campus development

The university also explored international cooperation to strengthen its environmental management and technological capacity.

On 17 July 2025, the Vice-Chancellor and the University Treasurer met with a delegation from the Japan International Cooperation Agency (JICA). The discussion focused on a potential environmental development initiative involving several areas:

- Renewable energy deployment and green power systems.
- Environmental protection and management.
- Advanced green technologies.
- Application of artificial intelligence and science and technology infrastructure.
- Financial technology solutions for more efficient campus resource management.

The engagement reflected the university's interest in applying technological solutions to improve environmental performance and modernize campus infrastructure.

In addition, on 14 August 2025, university leadership met with a delegation from Peking University, led by its Vice-President, to explore opportunities for collaboration in environmental science, clean technologies, and academic exchange.

These engagements created opportunities for future cooperation. The available records, however, describe strategic discussions and collaboration opportunities rather than completed renewable energy installations or fully operational joint projects.

4. Campus Greening, Emissions Prevention and Sustainable Operations

4.1 Moving away from open burning of organic waste

The management of fallen leaves is a practical environmental issue for a large urban university campus. Traditionally, the burning of accumulated leaves can be treated as a convenient waste disposal method. However, this practice releases smoke and particulate matter into the surrounding environment and wastes organic material that could otherwise be returned to the soil.

Recognizing this concern, the University of Dhaka launched the *Stop Burning Fallen Leaves* campaign, locally known as *Shora Pata Projjolon Bondho Korun*, on 11 December 2025 at the main campus plaza.

The initiative was jointly organized by the DU Arboriculture Center, Dhaka University Central Students' Union (DUCSU), Green Future Foundation, and Environment Parliament. Vice-Chancellor addressed the gathering and led a rally across the campus to promote compliance with the anti-burning directive.

The campaign was designed not simply as an awareness activity but as a change in campus maintenance practices. It encouraged university units and residential halls to collect fallen leaves rather than burn them.

4.2 Residential halls adopting organic waste recycling practices

The campaign was followed by practical action in residential halls.

At Kabi Jasim Uddin Hall, the administration completely stopped open burning of fallen leaves. Hall staff began systematically collecting the leaves and converting them into organic fertilizer for use in the hall gardens. Hall staff, administrators, and student representatives also participated in the university-wide rally.

Sheikh Fazilatunnesa Mujib Hall undertook hall-level mobilization and awareness activities to implement the anti-burning directive across its residential premises.

These activities demonstrate how a central environmental policy can be translated into everyday operational practices. Instead of treating fallen leaves as waste requiring disposal, the university began promoting their use as an organic resource.

The initiative has two important environmental dimensions. First, avoiding open burning helps prevent localized air pollution. Second, composting organic material provides an alternative to synthetic inputs for campus gardening and supports the return of organic matter to the soil.

The available data do not quantify the amount of leaves collected, fertilizer produced, or emissions avoided. Nevertheless, the initiative represents a practical step towards low-emission campus maintenance and circular resource management.

4.3 Promoting non-motorized transportation

Transportation is another area where universities can influence their environmental footprint. Encouraging walking and cycling can reduce dependence on motorized transport for short journeys within campus areas.

On 9 October 2025, Amar Ekushey Hall introduced two dedicated bicycle parking facilities named *Mandura-2* and *Mandura-3*. Together, the facilities can accommodate 150 bicycles.

The infrastructure provides students with designated parking spaces and supports the use of bicycles as a non-motorized mode of transportation.

Although the available records do not provide bicycle usage rates or estimates of avoided vehicle emissions, the facilities represent an important investment in sustainable campus mobility. Future monitoring of bicycle use could help the university assess the extent to which this infrastructure contributes to lower-emission transportation.

4.4 Improving residential energy efficiency

Alongside transportation improvements, the university undertook an energy-efficiency intervention at Amar Ekushey Hall.

On 9 October 2025, the hall installed 112 energy-efficient ceiling fans in double-occupancy student rooms. The fans were reported to have 12-year replacement guarantees.

The intervention reflects an effort to improve the efficiency of residential electricity use while maintaining student comfort. Energy-efficient appliances can contribute to lower electricity demand when they replace less efficient equipment.

The installation is a tangible operational achievement. However, the available records do not provide comparative electricity consumption data or measured energy savings. Establishing electricity-use baselines for residential halls would help the university assess the actual contribution of such upgrades to its emissions reduction objectives.

5. Climate-Resilient Infrastructure and Nature-Based Solutions

5.1 Integrating climate resilience into campus development

Long-term climate action requires infrastructure that can respond to environmental pressures, including intense rainfall, drainage congestion, urban heat, and ecological degradation.

During 2025, the University of Dhaka advanced the administrative implementation of its Master Development Project through a dedicated Project Management Unit (PMU). The project carries an estimated allocation of BDT 2,841 crore and is scheduled for implementation over five years, from 2025 to 2030. An initial allocation of BDT 60 crore was approved under the Annual Development Programme.

The development plan includes several components relevant to climate resilience and sustainable campus management. These include the restoration of campus water bodies, modernization of drainage systems, improvement of solid waste management, and development of residential and academic infrastructure.

The project is particularly important because it creates an opportunity to incorporate environmental considerations into the university's long-term physical development.

5.2 Restoration of campus water bodies

One of the environmental components of the Master Development Plan is the restoration of four major campus water bodies or reservoirs.

The proposed work includes structural restoration, dredging, and environmental and aesthetic improvements. Beyond their immediate campus functions, water bodies can contribute to urban environmental management by providing natural water storage and supporting local ecological systems.

In a densely developed urban area such as central Dhaka, properly maintained water bodies can support stormwater management and help reduce pressure on drainage systems during heavy rainfall. They may also contribute to localized cooling and provide habitats for urban biodiversity.

The proposed restoration therefore offers an opportunity to apply nature-based solutions within the university campus.

As of the available 2025 records, these interventions were part of the approved development framework. The restoration of all four water bodies should not be interpreted as completed during the reporting year.

5.3 Modernizing drainage and waste management systems

The Master Development Plan also includes modernization of campus-wide drainage systems and improvements to solid waste management infrastructure.

These interventions are relevant to climate adaptation because inadequate drainage and waste accumulation can increase the vulnerability of urban areas to waterlogging and localized flooding, particularly during periods of intense rainfall.

The proposed improvements are expected to strengthen the physical systems needed for a cleaner and more climate-resilient campus. Their implementation will be important for ensuring that infrastructure development supports environmental sustainability rather than simply expanding the university's built environment.

5.4 Planned residential and institutional infrastructure

The wider development programme includes:

- Four new female residential halls with a planned capacity of 2,600 students.
- Five new male residential halls with a planned capacity of 5,100 students.
- House tutor accommodation across the nine proposed halls.
- Six academic buildings.
- Five administrative and other buildings.
- Two residential buildings for faculty members and officers.
- Two public toilet facilities.
- Development of one sports field.

These components are primarily part of the university's wider infrastructure modernization programme. Their climate relevance will depend on how environmental considerations are incorporated into design and implementation, including energy efficiency, water management, drainage, waste handling, and green space provision.

The project offers an opportunity to introduce climate-responsive building standards and resource-efficient infrastructure across the university's future development.

6. Climate Research, Education and Disaster Resilience

6.1 Connecting academic research with climate policy

Universities contribute to climate action not only through their own environmental management but also by producing knowledge, developing solutions, and preparing future professionals.

In 2025, the University of Dhaka used its academic departments and research institutes to address climate change from several perspectives, including international relations, environmental governance, disaster management, renewable energy, and community resilience.

These activities helped connect climate science and environmental research with broader questions of national security, public policy, migration, and sustainable development.

6.2 Climate change and Bangladesh's foreign policy

On 11 December 2025, the Department of International Relations organized two academic seminars under the University Grants Commission's Higher Education Acceleration and Transformation (HEAT) Project.

The seminars examined the topic:

A Study on the Foreign Policy of Bangladesh to Address the Challenges of Globalization in the Domains of National Security, Climate Change and Labor Migration.

The discussions considered the relationship between climate change, international relations, and national security. Addresses by the Vice-Chancellor and Pro-Vice-Chancellor (Administration) highlighted the importance of incorporating climate-induced displacement, environmental migration, and international climate adaptation financing into national security and foreign policy planning.

This academic engagement is particularly relevant for Bangladesh, where climate vulnerability has implications beyond environmental management. Climate-related displacement and migration can affect livelihoods, communities, labour markets, and national development priorities.

By examining these issues through an international relations perspective, the university contributed to broader policy discussions on climate diplomacy and national resilience.

6.3 Strengthening coastal disaster management and climate education

Coastal communities in Bangladesh face significant risks from climate-related hazards. Strengthening their capacity to prepare for and respond to disasters requires research, education, institutional cooperation, and community-level engagement.

On 18 December 2025, the Vice-Chancellor met with Prof. Olaf Murlings of Central Queensland University, Australia. The meeting established a joint education and research

partnership focused on coastal disaster management and early-childhood climate education in coastal areas.

The proposed collaboration included capacity-building workshops for early-career researchers working in vulnerable coastal zones.

The initiative is important because climate resilience depends not only on physical infrastructure but also on knowledge and preparedness. Early climate education can help younger generations understand environmental risks and develop awareness of appropriate adaptation practices.

The partnership also provides an opportunity to connect the university's academic expertise with the practical challenges faced by vulnerable coastal communities. The available records describe the establishment of the partnership and its intended areas of cooperation; they do not yet report completed workshops or measurable community-level outcomes.

6.4 Community participation and disaster preparedness

On 11 December 2025, the Institute of Disaster Management and Vulnerability Studies (IDMVS), in collaboration with Volunteer Service Overseas (VSO) Bangladesh, organized an international conference titled *Every Contribution Matters* at the Nabab Nawab Ali Chowdhury Senate Bhaban.

The conference was held in observance of International Volunteer Day and was inaugurated by the Vice-Chancellor.

The discussions examined the role of community-level volunteer networks in emergency disaster response and localized climate adaptation. This approach recognizes that effective disaster preparedness requires coordination between institutions and communities, as well as the participation of individuals and local volunteer groups.

The conference helped create a platform for discussing how volunteer networks can contribute to emergency response, community preparedness, and resilience in disaster-prone areas.

6.5 Environmental governance and community participation in sustainable development

On 14 August 2025, the Department of Political Science organized a PhD seminar titled *Right Base Approach Community Participation and Ownership in Sustainable Development of Bangladesh*.

The seminar examined rights-based approaches, community participation, and local ownership in sustainable development.

Although the seminar addressed sustainable development more broadly rather than climate change alone, its themes are relevant to climate governance. Effective adaptation requires the involvement of communities that experience environmental risks directly. Participation and local ownership can help ensure that environmental policies respond to actual community needs.

The university also engaged with Peking University on 14 August 2025 to explore opportunities for collaboration in environmental science, green technologies, and academic exchange.

6.6 Supporting environmental research and green career pathways

On 20 November 2025, the Faculty of Earth and Environmental Sciences convened a planning meeting for a Career Festival and Research Fair scheduled for 14 January 2026.

The proposed event aimed to connect environmental science research with career opportunities in green sectors.

Although the fair was scheduled for the following year, its planning during 2025 demonstrated the university's interest in connecting academic knowledge with emerging professional opportunities in environmental and sustainability-related fields.

7. Renewable Energy Innovation and Clean Technology

7.1 Developing research capacity in renewable energy

The transition towards low-carbon development requires innovation in renewable energy technologies, improved energy efficiency, and stronger technical capacity.

In 2025, the University of Dhaka's Energy Institute organized several research seminars and knowledge-sharing activities focused on alternative energy systems and solar technology.

These activities contributed to the university's academic role in supporting the development of clean energy knowledge and technical expertise.

7.2 Research on microbial fuel cell technology

On 10 July 2025, the Energy Institute organized a seminar titled *A Seminar on Microbial Fuel Cell Technology: Introduction, Theory, Design*.

The seminar was presented by Research Assistant Md. Rakib Hossain and chaired by the Institute Director, Dr. S. M. Nasif Shams.

The discussion introduced the theoretical foundations and structural design of microbial fuel cells. This technology explores the possibility of generating electricity through biological processes involving the degradation of organic matter.

The research area is relevant to climate action because it connects waste management with potential bioenergy generation. It represents an example of how scientific research can explore technologies that may support more efficient resource use and alternative energy production.

The seminar was a research and knowledge-sharing activity. The available information does not establish that a commercial or operational microbial fuel cell system was installed at the university during 2025.

7.3 Solar-cell research and photovoltaic modelling

On 14 August 2025, the Energy Institute organized a technical seminar titled *Introduction to Solar Cell and SCAPS-1D (Part-1): Prerequisites for Publication on the Technological and Knowledge Implications of Solar Cells*.

The seminar focused on the use of SCAPS-1D numerical simulation for photovoltaic research. Participants were introduced to modelling techniques used to examine solar-cell structures and optimize their performance.

Computational modelling can help researchers investigate solar-cell layer configurations and identify potential improvements before undertaking more resource-intensive physical experiments.

This activity contributed to the university's research capacity in solar energy and provided a technical foundation for further work in photovoltaic technology.

7.4 Knowledge exchange on Bangladesh's renewable energy transition

On 13 November 2025, the Energy Institute organized a national dissemination workshop titled *EnDev's 16-Year Journey*.

The workshop featured the Chairman of the Sustainable and Renewable Energy Development Authority (SREDA) as Chief Guest and reviewed 16 years of renewable energy implementation in Bangladesh.

The discussion examined decentralized solar power systems, including off-grid applications, and considered priorities for the country's future renewable energy development.

The event created an opportunity to connect university-based research and technical knowledge with national renewable energy policy discussions. It also strengthened the role of the university as a platform for dialogue between academic institutions and public-sector energy authorities.

8. Summary of Key SDG 13 Initiatives in 2025

The following table consolidates the principal activities documented for the reporting year.

Date	Initiative	Main contribution to climate action
10 July 2025	Energy Institute seminar on microbial fuel cell technology	Research and knowledge development in waste-to-energy technology.
17 July 2025	Strategic meeting with JICA	Exploration of renewable energy, environmental management, and green technology cooperation.

14 August 2025	Meeting with Peking University	International research collaboration in environmental science and clean technology.
14 August 2025	SCAPS-1D solar-cell modelling seminar	Technical capacity development in photovoltaic research.
14 August 2025	PhD seminar on community participation in sustainable development	Academic discussion on participatory environmental governance.
9 October 2025	Bicycle parking and energy-efficiency upgrades at Amar Ekushey Hall	Support for non-motorized transport and more efficient electricity use.
13 November 2025	EnDev renewable energy workshop	Knowledge exchange on renewable energy deployment and national policy.
20 November 2025	Master Development Plan implementation framework	Planned water-body restoration, drainage modernization, and waste management improvements.
20 November 2025	Environmental research fair planning	Preparation for connecting environmental research with green-sector careers.
11 December 2025	Foreign policy and climate change seminars	Academic engagement with climate migration, national security, and climate policy.
11 December 2025	International disaster resilience conference	Discussion of volunteer networks and community-based disaster response.
11 December 2025	Stop Burning Fallen Leaves campaign	Prevention of open organic waste burning and promotion of composting.
11 December 2025	Hall-level leaf collection and organic fertilizer production	Practical organic waste recycling and greener campus maintenance.
18 December 2025	National environmental recognition	Formal recognition of the university's prohibition of fireworks and sky lanterns.
18 December 2025	Partnership discussion with Central Queensland University	Collaboration framework for coastal disaster management and climate education.

11. Conclusion

In 2025, the University of Dhaka continued to develop its institutional response to climate change through environmental governance, campus-level interventions, academic research, and international cooperation.

The prohibition of environmentally harmful celebratory activities, the campaign against open leaf burning, the introduction of bicycle parking and energy-efficient fans, and the advancement of climate-responsive infrastructure planning demonstrate the university's commitment to improving its environmental performance.

At the same time, research and academic engagement on renewable energy, climate diplomacy, coastal disaster management, and community resilience strengthened the university's contribution to the wider climate action agenda.

The next stage of progress should focus on moving from individual initiatives towards a measurable and integrated institutional climate action system. Establishing emissions baselines, monitoring energy consumption, evaluating infrastructure performance, and expanding climate adaptation research will be essential for demonstrating long-term results.

Through continued institutional commitment and stronger measurement systems, the University of Dhaka can further strengthen its role as a centre of climate research, environmental responsibility, and climate-resilient development in Bangladesh.