### American International University-Bangladesh Sustainable Development Goals Report

## SUSTAINABLE DEVELOPMENT GALS







































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# AIUB and SDG11: Sustainable Cities and Communities Initiatives (2020–2025)

American International University-Bangladesh (AIUB) has demonstrated a strong commitment to Sustainable Development Goal 11 (Sustainable Cities and Communities) through a wide range of initiatives since 2020. From creating a **green**, **safe**, **and accessible campus** to engaging with local communities and advancing research in urban sustainability, AIUB's efforts exemplify how a university can foster inclusive, resilient urban development <u>aiub.edu</u> <u>aiub.edu</u>. The following report highlights AIUB's key initiatives in five areas – campus infrastructure, community outreach, cultural heritage, research and innovation, and disaster preparedness – with verified examples illustrating their impact.

#### **Campus Infrastructure and Planning**

AIUB's permanent campus in Dhaka is built with sustainability and accessibility in mind. The 13-acre campus blends modern academic architecture with green open spaces, providing a peaceful environment within the dense city <u>aiub.edu</u>. All facilities are designed to be accessible for people with disabilities and the elderly, reflecting an inclusive campus layout. Notably, the campus offers 44,000+ m² of space with features like ramps and elevators, ensuring mobility for all users <u>aiub.edu</u>. The university has also prioritized energy efficiency and green infrastructure – its Climate Action Plan calls for energy-efficient appliances, solar panels, and water conservation measures on campus <u>aiub.edu aiub.edu</u>. These efforts align with AIUB's strategy to reduce its carbon footprint and eventually achieve net-zero emissions on campus <u>aiub.edu aiub.edu</u> aiub.edu.

In terms of safety and resilience, AIUB's campus infrastructure meets high standards. The university won the ESSAB Safety Excellence Award 2022 for outstanding fire safety systems across its entire campus aiub.edu. This award – presented by Bangladesh's Electronic Safety and Security Association – recognized AIUB as the only educational institution with comprehensive fire detection, protection, and evacuation plans in every building aiub.edu aiub.edu. The main academic complex (D-Building, 10 stories) was built to national building codes and is equipped with modern firefighting equipment and emergency exits, exemplifying safe and sustainable building design aiub.edu aiub.edu. AIUB's campus planning thus not only minimizes environmental impact but also provides a secure, well-planned environment for students and staff aiub.edu aiub.edu. Moreover, the university has introduced initiatives like on-campus greenery and encourages environmentally friendly transport for students (including a dedicated shuttle service across Dhaka, as reported on social media in 2023) to reduce commute-related emissions and congestion. Overall, AIUB's campus stands as a model of sustainable infrastructure, balancing state-of-the-art facilities with green design and inclusivity aiub.edu.

#### **Community Outreach and Engagement**

Members of the AIUB Environment Club and local students during the "Roots of Tomorrow 2025" tree plantation drive at a Dhaka school, an outreach initiative to expand urban green spaces.

AIUB actively collaborates with local communities, schools, and organizations to promote sustainable urban development and awareness. A prime example is the "Roots of Tomorrow 2025 – Plant Today, Grow Tomorrow" tree plantation drive organized by the AIUB Environment Club in September 2025 <u>aiub.edu</u>. Over two days, students and faculty planted saplings at multiple schools and colleges in Dhaka and Gazipur, in partnership with those institutions <u>aiub.edu</u>. This initiative aimed to increase urban green spaces to improve air quality and biodiversity, and included awareness sessions for school students on the importance of protecting the environment <u>aiub.edu aiub.edu</u>. Such outreach not only greens the community but also educates youth about sustainability, reflecting AIUB's commitment to engage beyond its campus.

AIUB also partners with NGOs and government bodies on community-centered projects. For instance, the university was a key collaborator in a World Bank-funded research project under the Innovations for Climate Adaptation and Resilience (iCARE) program, focused on promoting solar-powered irrigation for climate change adaptation in rural and peri-urban communities <a href="mailto:aiub.edu">aiub.edu</a> aiub.edu</a>. In December 2024, AIUB hosted a high-profile workshop to disseminate the findings of this project, bringing together policymakers, academics, and practitioners to discuss sustainable technology adoption <a href="mailto:aiub.edu">aiub.edu</a> aiub.edu</a>. Government representatives, including an Additional Secretary of the Agriculture Ministry, attended as guests of honor, underscoring the project's relevance to national sustainability goals <a href="mailto:aiub.edu">aiub.edu</a>. By facilitating such dialogues and contributing to practical solutions (like solar irrigation), AIUB connects academic innovation with real-world community impact.

Another area of outreach is through **educational programs and workshops on urban sustainability**. AIUB regularly arranges public seminars, lectures, and training that involve the broader community. For example, faculty from AIUB's Architecture Department have conducted workshops for **low-income urban residents** (in collaboration with Habitat for Humanity Bangladesh) on climate change and housing adaptation, to raise awareness in slum communities about building resilience against floods and heat <u>aiub.edu</u>. In these sessions, participants learn about improving their living conditions and safety in the face of climate impacts, demonstrating AIUB's concern for vulnerable urban populations. The university's leadership has also engaged in global forums – in 2025, AIUB's former Vice Chancellor highlighted the university's student-led climate solutions (tree plantations, recycling drives, etc.) as examples of how universities in climate-vulnerable nations can empower communities <u>aiub.edu</u>. Through such multifaceted outreach, AIUB strengthens urban sustainability at the community level, building partnerships and sharing knowledge to create more **inclusive**, **resilient cities**.

#### **Cultural Heritage and Inclusion**

Students and performers celebrate **AIUB Boishakh Utshab 1432** (Bengali New Year festival) on campus, showcasing traditional music, art, and inclusive community spirit.

AIUB's initiatives also emphasize preserving cultural heritage and fostering inclusion in the urban context. The university encourages students to engage with Bangladesh's rich cultural history and local identity. As part of academic and extracurricular activities, **study visits to heritage sites** are organized – for example, AIUB architecture and arts students visited the **Liberation War Museum** and the historic **Panam City** in 2023 <u>aiub.edu aiub.edu</u>. These trips helped students understand the importance of heritage conservation and learn how history and culture can inform sustainable urban development. By witnessing preserved historical architecture and museums, students gain insight into integrating cultural preservation with modern city planning.

AIUB students have also taken part in community-based heritage projects. In July 2023, Media and Mass Communication students participated in a field workshop at **Jamdani Village** (Sonargaon), a locality famed for traditional handwoven textiles <u>aiub.edu</u>. Guided by faculty and in collaboration with a local field school, the students documented the cultural landscape and stories of the Jamdani weavers – effectively preserving oral histories and the "sense of place" of that community <u>aiub.edu</u>. The project, titled "Story of Jamdani People and Place," allowed students to record environmental and cultural narratives from the ground up, and to appreciate the significance of this UNESCO-recognized intangible heritage. Such initiatives demonstrate how AIUB integrates cultural heritage into its sustainable communities agenda, by training students to value and document local traditions as part of urban culture <u>aiub.edu</u> aiub.edu.

On campus, AIUB celebrates cultural diversity and inclusion through vibrant events that involve not just the university members but also the wider public. The annual Boishakh Utshab (Bengali New Year festival) is a hallmark event that showcases Bangladesh's heritage. In April 2025, AIUB hosted Boishakh Utshab 1432 with day-long festivities at its campus, including traditional food stalls, folk art, music concerts, and performances by both students and renowned alumni artists aiub.edu aiub.edu. The celebration brought together students, faculty, alumni, and guests in a joyous expression of Bengali culture. Importantly, the event was designed to be inclusive, creating a welcoming environment for all participants regardless of background. As noted in AIUB's own reporting, the Boishakh festival "reflected AIUB's commitment to honoring cultural heritage while creating an inclusive and joyous environment for all" aiub.edu. Students took the lead in arranging cultural exhibitions and even installed public art (e.g. colorful road art installations capturing folk motifs) in collaboration with the Architecture department aiub.edu. By weaving cultural heritage into campus life and inviting community participation, AIUB helps strengthen social ties and community identity - key aspects of sustainable communities. These cultural initiatives ensure that development and modernization do not come at the cost of losing local traditions or excluding minority voices, embodying the principle of "inclusive, safe and vibrant" communities under SDG11.

#### **Research and Innovation**

AIUB leverages its academic strengths to drive research and innovation for sustainable cities. Sustainability is integrated into the **curriculum and student projects** across disciplines — in fact, AIUB has made sustainable development a compulsory component in all degree programs, encouraging every student to learn about and contribute to the SDGs <u>aiub.edu</u>. The university established the **Dr. Anwarul Abedin Institute of Innovation (D2A2I)** to support research and projects on sustainability and technology, empowering students and faculty to become innovators in areas like urban planning, renewable energy, and climate resilience <u>aiub.edu</u>. Through D2A2I and other centers, AIUB has launched specialized research groups such as the

Center for Sustainable Energy Research (CSER), focusing on green energy solutions for communities <u>aiub.edu</u>. These institutional measures have fostered a culture of innovation geared towards solving urban challenges.

Notably, AIUB's faculty and students have produced numerous research publications since 2020 that address urban sustainability and resilience. For example, faculty in Architecture and Engineering have studied how to make cities more livable and inclusive: one research assessed the connectivity of community parks and playgrounds in Dhaka neighborhoods to improve their usage by local residents aiub.edu. Another publication explored "smart city" technologies for next-generation healthcare delivery in urban areas aiub.edu, illustrating AIUB's interdisciplinary approach to smarter, healthier cities. Technological innovation is a strong theme in AIUB's research output. Engineering faculty have developed prototypes like a digital IoT-based "smart bio-toilet" system to improve hygiene in urban public spaces aiub.edu. They have also created IoT-based power monitoring systems for solar PV installations, contributing to more efficient and sustainable urban energy management aiub.edu. In the energy domain, AIUB researchers are involved in projects like "Renewable Energy of Bangladesh for Carbon-free Clean Energy Transition (C2ET)" and studies on optimized microgrid systems – work that is vital for powering cities with clean, resilient energy infrastructure aiub.edu. Through publishing in journals and presenting at conferences, AIUB's scholars are influencing the discourse on sustainable urban development well beyond the campus.

AIUB also prioritizes hands-on innovation and competitions to engage students with realworld urban issues. The university hosts hackathons, seminars, and exhibitions that spur creative problem-solving. In November 2024, AIUB hosted the nationwide Cisco IoT Hackathon 2024 on its campus, where 125 student teams competed by developing tech solutions for societal challenges aiub.edu. The winning project was a "Smart Farm Management System using IoT for enhanced agricultural productivity and disaster mitigation," showcasing the students' ability to devise cost-effective solutions linking urban tech and rural resilience aiub.edu. Other top projects included an IoT device to assist people with disabilities (for cerebral palsy patients) and an interactive educational bot for children aiub.edu – innovations that reflect inclusive design and community well-being. AIUB's support for such competitions and its provision of startup incubation and funding opportunities for student innovations underline its role as a living lab for sustainable solutions. In the architecture department, regular design competitions (e.g. Design Charrette, PROBHABOK) and thesis exhibitions (Design Dialogue) center on sustainable and responsive urban design, preparing students to build greener and more resilient cities aiub.edu aiub.edu. By embedding sustainability in education, research, and innovation challenges, AIUB is producing graduates who are not only aware of urban sustainability issues but are also equipped to tackle them with fresh ideas and entrepreneurial vigor.

#### **Disaster Preparedness and Resilience**

AIUB representative receives the ESSAB Safety Excellence Award 2022 from the State Minister for Disaster Management, recognizing the university's exemplary fire safety and emergency preparedness measures.

Building resilience against disasters and climate risks is a critical aspect of AIUB's impact on sustainable communities. On campus, robust **disaster preparedness plans** are in place to protect the large student and staff population. The pinnacle of this effort was AIUB's receipt of the **ESSAB Safety Excellence Award** at the 8th International Fire Safety & Security Expo in 2022 <u>aiub.edu</u> <u>aiub.edu</u>. This national award highlighted AIUB's comprehensive fire safety implementation – including alarms, fire suppression systems, trained safety personnel, and regular evacuation drills – across all campus buildings <u>aiub.edu</u>. The main academic building ("D-Building") exemplifies these standards, featuring a proper fire escape network and monitoring on every floor, fully compliant with building codes <u>aiub.edu</u>. AIUB's management maintains an active safety team and service engineers who continuously supervise and improve emergency systems <u>aiub.edu</u>. These measures ensure that the campus community is well-protected and can **respond effectively to emergencies**, from fires to other hazards. The culture of safety is ingrained, with no compromise on emergency preparedness – a stance that not only earned accolades but also serves as a model for other universities <u>aiub.edu</u>.

AIUB extends its focus on resilience to the broader community, especially to vulnerable urban populations. The university recognizes that sustainable cities must safeguard all residents, including those in informal settlements, against disasters and climate impacts. In line with this, AIUB has pursued initiatives to improve housing and living conditions in slum areas as part of its social responsibility. The Architecture Department, for example, led a research-based initiative titled "Transforming Slum Dwellings into Better Livable Units," which explores lowcost, minimal-intervention approaches to upgrade housing in Dhaka's slums researchgate.net. This initiative aims to make slum homes safer and more resilient (e.g., better ventilated, structurally sound, and adaptable to floods or heat) without large-scale relocation, thereby improving quality of life for underprivileged residents aiub.edu. In workshops associated with this project, AIUB faculty worked directly with slum dwellers to raise awareness about climate change and gather input on their needs <u>aiub.edu</u> aiub.edu. By involving the community in co-designing solutions, the project embodies inclusive resilience planning. While the research is ongoing (with findings published in the AIUB Journal of Science and Engineering), its practical orientation reflects AIUB's commitment to disaster risk reduction at the grassroots level.

Moreover, AIUB's technological innovations contribute to disaster resilience in urban infrastructure. Engineering researchers have developed systems like an **automated protection mechanism for electrical and gas lines during earthquakes**, presented at IEEE conferences <u>aiub.edu</u>. Such innovations can be critical in cities like Dhaka, which are earthquake-prone, by preventing secondary disasters (fires, leaks) in the event of a quake. Other projects, like the aforementioned IoT-based smart farm and microgrid designs, also enhance resilience by ensuring steady food production and power supply in face of disruptions <u>aiub.edu aiub.edu</u>. Through academic **courses on disaster management**, climate adaptation training, and student involvement in emergency response simulations, AIUB integrates resilience education into its programs <u>aiub.edu aiub.edu</u>. The university's **climate action partnerships** with government and NGOs further reinforce community preparedness – for example, AIUB's collaboration with Habitat for Humanity on climate-resilient housing and its participation in national forums on disaster management feed into policy and practice improvements <u>aiub.edu aiub.edu</u>.

In summary, AIUB's approach to SDG11 is holistic, addressing infrastructure safety, community resilience, and climate adaptation as key pillars of sustainable urban life. By **planning ahead for emergencies and empowering communities** with knowledge and tools, AIUB helps build urban settlements that can withstand and recover from disasters. This

proactive stance on disaster preparedness, combined with all the initiatives detailed in previous sections, underlines AIUB's role as a catalyst for sustainable cities and communities in Bangladesh and beyond. Each initiative – whether it's a green campus project, a community tree planting, a cultural festival, a smart city research, or a climate resilience workshop – contributes to the larger goal of making cities **inclusive**, **safe**, **resilient**, **and sustainable** <u>aiub.edu</u>, in line with the targets of SDG11. Through evidence-based action and community engagement, AIUB exemplifies how a higher education institution can drive positive change towards more sustainable urban futures.