American International University-Bangladesh Sustainable Development Goals Report

SUSTAINABLE DEVELOPMENT GALS







































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SDG 15: Life on Land – AIUB's Commitment to Terrestrial Ecosystems

American International University–Bangladesh (AIUB) is actively engaged in promoting Sustainable Development Goal 15 (Life on Land) by supporting the conservation and sustainable use of terrestrial ecosystems <u>aiub.edu</u>. The university integrates environmental stewardship into its operations, academics, and community outreach, demonstrating a strong commitment to preserving biodiversity and fostering sustainable land use. This report outlines AIUB's key initiatives and policies aligned with SDG 15, including campus tree-planting drives, relevant research and academic programs, sustainable campus landscaping practices, community partnerships for conservation, and institutional policies guiding environmental sustainability.

Tree-Planting and Campus Greening Initiatives

Members of AIUB's Environment Club conducting a "Roots of Tomorrow 2025" tree-planting drive with local school students (September 2025). Tree-planting and campus greening are central to AIUB's Life on Land initiatives. The AIUB Environment Club (AEC), established in 2023, has led numerous campaigns to increase green cover and awareness. In September 2025, AEC organized a two-day tree plantation drive titled "Roots of Tomorrow 2025 - Plant Today, Grow Tomorrow" across several schools and colleges in Dhaka and Gazipur aiub.edu. This community-wide effort involved students and teachers from partner institutions, who joined AIUB volunteers in planting saplings and learning about the importance of expanding urban green spaces aiub.edu. Notably, the drive emphasized native tree species well-suited to the local environment – including Neem, Rain Tree, Guava, Mango, and Krishnachura – to ensure the planted trees support local biodiversity aiub.edu. These initiatives not only green the campuses and surrounding communities but also serve as environmental education for youth, reflecting AIUB's commitment to fostering a greener and healthier future aiub.edu.

Dignitaries and AIUB representatives at the "Youthful Roots: Planting Harmony for Tomorrow" event on AIUB campus (June 2024), part of the Green Fest initiative. AIUB has also hosted high-profile tree-planting events in collaboration with external organizations. In June 2024, AIUB partnered with the Women's Federation for World Peace—Bangladesh (WFWP-BD) and industry sponsors for "Youthful Roots: Planting Harmony for Tomorrow," an event under the national Green Fest 2023 program aiub.edu. At this event, distinguished guests — including foreign diplomats and AIUB's leadership — planted saplings on campus alongside student teams aiub.edu. Each student team "adopted" a tree to nurture over time, with an advisory board monitoring progress, and outstanding teams to be recognized as "Youth Green Leaders" aiub.edu. This innovative approach engages students in the long-term care of trees, instilling a sense of land stewardship. Such events raise awareness of the value of a green environment and encourage youth participation in sustainability, in line with SDG 13 (Climate Action) and SDG 15 aiub.edu aiub.edu. Beyond one-off events, the AIUB Environment Club routinely holds tree plantation campaigns, seminars, and rallies to educate the university community and the broader society on issues like deforestation and

environmental protection <u>aiub.edu</u>. For example, the club's activities highlight the impacts of deforestation and promote reforestation as a solution, aiming to protect endangered plant species and restore habitats <u>aiub.edu</u> <u>aiub.edu</u>. Through these greening initiatives on campus and beyond, AIUB concretely demonstrates its dedication to improving air quality, enhancing urban biodiversity, and mitigating climate change impacts.

In addition to student-led efforts, AIUB commemorates global environmental events to reinforce its greening mission. On World Environment Day each year, the university community engages in activities that promote sustainable land use and ecosystem protection aiub.edu. By celebrating such occasions, AIUB raises awareness about the need for conservation of land resources and encourages sustainable practices among students and staff. These combined tree-planting and greening efforts have positioned the campus as a living laboratory for environmental stewardship, directly contributing to SDG 15 targets on afforestation and biodiversity conservation.

Research and Academic Programs on Biodiversity and Sustainable Land Use

AIUB leverages its academic and research capacity to address biodiversity conservation, sustainable agriculture, and land management challenges. Faculty and students are actively involved in research projects that advance SDG 15 objectives. For instance, AIUB researchers have developed an early-warning system to mitigate human-wildlife conflict with elephants – one of Bangladesh's pressing conservation issues aiub.edu. This project uses signal processing and sensor technology to detect elephant movements (through footsteps and vocalizations) near human settlements and sends warning alerts to forest officers and villagers aiub.edu. The aim is to prevent destructive encounters by giving communities time to respond and by safely redirecting elephants back to forest habitats aiub.edu. Such innovative research contributes to protecting both human lives and wildlife, addressing a serious conservation problem through technology and community awareness.

Multiple research initiatives at AIUB focus on sustainable agriculture and land restoration. One notable project, led by AIUB's Department of Chemistry and Center for Nanotechnology Research, received a grant under the Bangladesh Academy of Sciences – USDA Endowment Program aiub.edu. The project, "Desalination of water and soil using nanomaterials and nanotechnology," is a three-year study (2025–2028) aimed at remediating soil salinity in coastal Bangladesh aiub.edu. High soil salinity is a major barrier to crop production; this research is developing nano-engineered solutions to remove salt from soil and water, thereby enhancing agricultural yields and supporting food security aiub.edu. The project exemplifies AIUB's contribution to sustainable land use and agriculture through cutting-edge science, with the potential to reclaim degraded lands for farming and improve livelihoods in salinity-affected regions. It also involves collaboration with the University of Dhaka, illustrating AIUB's partnerships in advancing environmental research aiub.edu.

AIUB faculty have also explored land use change and its impacts. For example, studies have been conducted on the **conversion of agricultural land to non-agricultural uses** in Bangladesh, quantifying the rate of farmland loss and recommending policies to protect vital croplands <u>aiub.edu</u> <u>aiub.edu</u>. In the engineering field, researchers at AIUB have developed "smart agriculture" technologies. One project designed an **IoT-based solar-powered smart irrigation system** to modernize traditional farming <u>aiub.edu</u>. By automating soil moisture

sensing, weather monitoring, and irrigation scheduling, this system helps farmers optimize water use and reduce manual labor <u>aiub.edu</u>. Such innovations address agricultural efficiency while conserving resources, reflecting AIUB's focus on sustainable agriculture techniques. Another interdisciplinary research effort is an *IoT-based smart poultry and fish farming system* that improves farming practices and productivity while minimizing ecosystem impact <u>aiub.edu</u>. Through these projects, AIUB researchers are tackling diverse "Life on Land" issues—from **wildlife conservation** and **land degradation** to **sustainable farming and food security**—and actively publishing their findings for wider impact.

Academically, AIUB integrates biodiversity and sustainability topics across its curricula to educate future leaders in land stewardship. The university ensures that various degree programs include coursework related to environmental sustainability aiub.edu aiub.edu. For example, the Bachelor of Architecture program offers a sequence of courses titled "Environment and Design I, II, III," which focus on sustainable design practices, ecological planning, and the relationship between built environments and natural landscapes aiub.edu. These courses train architecture students to consider biodiversity and green space preservation in urban design. Similarly, engineering students in the BSc in Computer Engineering program take a course on "Engineering Ethics and Environmental Protection," underscoring the ethical responsibility of engineers to protect the environment aiub.edu. Beyond these, AIUB's Faculty of Business Administration includes courses like "Ethics, Sustainability, and Communication for Development," and the Department of Economics offers "Environmental Economics and Sustainability." These academic offerings cover sustainable development concepts, environmental policy, and resource management, thereby sensitizing students to land and environmental issues in diverse fields.

To further bolster research and training in sustainability, AIUB has established dedicated centers and groups. The **Center for Sustainable Energy Research (CSER)** under the Dr. Anwarul Abedin Institute of Innovation is one such hub that, while focused on renewable energy, contributes to broader environmental objectives including climate change mitigation aiub.edu. In addition, the university supports student-led initiatives like the AIUB Environment Club, which operates as a co-curricular platform for students to engage in projects and awareness campaigns on conservation, pollution, and climate issues aiub.edu. Through these combined academic and research endeavors, AIUB not only generates new knowledge for sustainable land management and biodiversity conservation, but also equips its graduates with the skills and mindset to drive positive environmental change in their future careers aiub.edu.

Green Campus and Biodiversity in Campus Landscaping

AIUB's commitment to "Life on Land" is evident in the way it manages and develops its campus environment. The university's main campus in Kuratoli, Dhaka, is intentionally designed as a **Green Campus**, featuring open architecture that harmonizes with nature <u>aiub.edu</u>. Lush greenery, courtyards, and vegetated open spaces are integrated throughout the campus to create an ideal environment for learning, creativity, and well-being <u>aiub.edu</u>. This design reflects a "connected to nature" philosophy – for instance, the campus includes green walls, rooftop gardens, and landscaped plazas (as seen during the Green Fest event) that provide habitat for plants and cooling green cover in an otherwise dense urban area <u>aiub.edu</u>. By prioritizing green infrastructure, AIUB not only enhances campus aesthetics but also contributes to urban biodiversity and micro-climate regulation, aligning with SDG 15 goals.

Crucially, AIUB emphasizes the use of **native plant species** and the preservation of local biodiversity in its campus landscaping. The university's development plans incorporate local flora to ensure that campus green spaces support indigenous species of trees and birds <u>aiub.edu</u>. For example, when tree-planting activities are held on campus or in surrounding communities, preference is given to native varieties like Neem, Mango, and other local trees that are adapted to the Bangladeshi ecosystem <u>aiub.edu</u>. This approach increases the survival rate of planted saplings and fosters habitats for native pollinators and wildlife even within the city. AIUB's green campus ethos is also evident in its **Green Infrastructure Strategy** outlined in the university's Climate Action Plan: the plan calls for developing more green spaces, planting diverse trees, and using eco-friendly construction materials to boost biodiversity on campus <u>aiub.edu</u>. These measures, such as creating pocket gardens and maintaining existing greenery during new construction, help mitigate the environmental footprint of campus operations and serve as a living classroom for sustainability.

Moreover, AIUB engages in systematic efforts to maintain and improve its campus green spaces. Landscaping practices favor sustainable techniques — for instance, landscaping waste is likely composted or repurposed as part of the waste management program, and irrigation of lawns/gardens is managed efficiently (potentially using treated greywater or timed watering to avoid waste). The campus also features recreational areas and open spaces that double as green zones for the university community aiub.edu. By ensuring that the campus remains a green oasis in Dhaka, AIUB provides students and staff with daily exposure to nature, which research shows can enhance wellbeing and environmental awareness. Importantly, these green campus efforts illustrate AIUB's philosophy that universities should lead by example in sustainable land use. The campus itself exemplifies how thoughtful planning and maintenance of green spaces can coexist with development, thus encouraging other institutions to adopt similar biodiversity-friendly campus designs.

Community Outreach and Partnerships for Land Conservation

AIUB recognizes that promoting life on land extends beyond the campus boundaries, and thus the university actively collaborates with communities, NGOs, and government agencies on conservation and sustainable land management initiatives. One major avenue of outreach is through student clubs and volunteering programs that take environmental action into the community. The AIUB Environment Club's tree plantation drives are a prime example: the "Roots of Tomorrow 2025" campaign was conducted in partnership with local schools and colleges, effectively spreading the message of urban forestry and climate action to youth outside AIUB aiub.edu. Over two days, AIUB students worked side by side with schoolchildren and teachers to plant saplings and deliver awareness sessions on protecting green spaces aiub.edu. This collaborative approach not only expanded tree cover in multiple educational institutes' premises, but also built a network of young environmental stewards. The initiative was supported by AIUB's Office of Student Affairs and Office of Administration, illustrating internal coordination for external impact aiub.edu. By involving other institutions and the local community, AIUB multiplied the reach of its Life on Land efforts, demonstrating leadership in urban environmental stewardship and forging partnerships in line with SDG 17 (Partnerships for the Goals).

AIUB also partners with non-governmental organizations and industry on broader sustainability projects. The "Youthful Roots: Planting Harmony for Tomorrow" event in 2024

was initiated by WFWP-Bangladesh and sponsored by a private sector group (Meghna Group of Industries), with AIUB hosting and co-organizing the program aiub.edu. Such a partnership model — involving NGOs, industry, and academia — exemplifies how AIUB leverages collaboration to advance common goals in land restoration and climate awareness. The presence of international figures (e.g. ambassadors) and government program representatives at that event aiub.edu also underscores AIUB's connectivity with national and international networks for sustainability. By engaging in the Green Fest campaign, AIUB contributed to a nationwide agenda of building awareness on green living and ecosystem impacts for youth aiub.edu. Furthermore, the event's structure, which had multiple universities participate in similar tree nurturing projects aiub.edu, indicates AIUB's willingness to share best practices and coordinate with peer institutions for environmental impact. This spirit of partnership enhances the effectiveness of SDG 15 initiatives and positions AIUB as a hub for collaborative conservation efforts in Bangladesh.

On a policy and program level, AIUB collaborates with local authorities and communities to protect and manage shared land resources. The university has stated that it "collaborates with local communities to maintain shared land ecosystems, working toward a collective approach to conservation." aiub.edu In practice, this may involve participating in community tree planting in public spaces, providing expert assistance for local environmental projects, or adopting nearby green areas for joint maintenance. For example, AIUB faculty experts in environmental science and engineering have the opportunity to advise community-led initiatives on waste management or urban gardening, thereby extending the university's technical know-how to benefit local conservation. AIUB is also a member of global frameworks such as Responsible Futures (EAUC) and a signatory to the UN's Race to Zero campaign for carbon neutrality aiub.edu aiub.edu. While these are climate-focused, they entail partnerships with international bodies, government agencies, and other universities, reinforcing AIUB's capacity to contribute to policies and actions that indirectly benefit terrestrial ecosystems (through climate change mitigation, for instance). Additionally, AIUB frequently hosts workshops and seminars in collaboration with government and NGO partners on topics like renewable energy, sustainable agriculture, and environmental health – all of which tie into sustainable land use. For instance, AIUB partnered with the government's Sustainable and Renewable Energy Development Authority (SREDA) to host a workshop on solar energy aiub.edu, and with Grameen Shakti (a prominent NGO) for a clean energy workshop aiub.edu, showcasing how such collaborations disseminate knowledge for sustainable practices.

Overall, community outreach is built into AIUB's strategy for SDG 15. Through educational outreach programs, joint projects, and strategic partnerships, the university amplifies its impact on land conservation beyond its campus. This collaborative, inclusive approach helps raise public awareness about biodiversity and sustainability, encourages community participation (e.g. tree planting by local youth), and fosters a culture of environmental responsibility in society at large. AIUB's outreach and partnership initiatives thus embody the idea that preserving "Life on Land" is a shared responsibility – one that the university enthusiastically shares with others.

Institutional Policies on Sustainability, Biodiversity, and Land Stewardship

AIUB's commitment to environmental sustainability and biodiversity is underpinned by formal institutional policies and strategic plans. As a pioneering private university in sustainability,

AIUB has developed comprehensive policies to ensure its operations and academics contribute positively to the environment. Chief among these is the AIUB Climate Action Plan (CAP), which serves as a roadmap for the university to reduce its environmental footprint and enhance campus resilience. The Climate Action Plan sets ambitious targets for a greener campus and outlines concrete measures to achieve them aiub.edu. Notably, the plan's Green Infrastructure component calls for expanding green spaces on campus, planting diverse tree species, and employing eco-friendly construction materials – all to boost local biodiversity and create a sustainable built environment aiub.edu. In alignment with this plan, AIUB convened a Climate Action Task Force that includes faculty, staff, and students, ensuring broad governance and monitoring of these sustainability initiatives aiub.edu. The CAP also commits AIUB to the global Race to Zero pledge, aiming for a future carbon-neutral campus and integrating climate education into the university's core mission aiub.edu. By institutionalizing climate and sustainability goals, AIUB is proactively addressing deforestation (through tree plantation commitments) and land degradation as part of its climate mitigation and adaptation strategies.

Beyond climate action, AIUB has explicit policies that emphasize environmental stewardship and ethical governance (often referred to as ESG – Environmental, Social, and Governance – considerations). The university's Sustainability Policy articulates AIUB's dedication to "environment enhancement activities by means of research, utilization of resources, facility and funding management." aiub.edu In this policy, AIUB defines sustainability in a broad sense, recognizing the interconnection between people and the planet, and pledges collaborative efforts to uphold environmental values aiub.edu. The policy sets future milestones such as increasing sustainability-focused research, reducing the campus carbon footprint, cutting waste generation, and engaging more students and staff in sustainability initiatives aiub.edu. These targets directly relate to SDG 15 (for example, reducing solid waste and emissions helps protect land and air quality, while research and engagement foster innovative solutions for conservation). AIUB clearly prioritizes projects and activities that advance sustainable development, and has even funded student and faculty projects in this arena ajub.edu. For instance, AIUB has supported a Student Solar Car Project and a Sustainable Living Project in collaboration with Habitat for Humanity, indicating funding alignment with sustainability outcomes aiub.edu. Such institutional backing ensures that ideas for protecting the environment (including terrestrial ecosystems) receive the necessary resources to come to fruition.

AIUB's governance documents also include a *Sustainable Investment Policy* that guides how university funds are managed in an environmentally and socially responsible manner. As part of this policy, AIUB commits to ensure its financial investments and partnerships do not contribute to environmental harm and instead support positive impacts <u>aiub.edu aiub.edu</u>. For example, AIUB avoids affiliations with industries that damage society or the environment (like illegal logging or other harmful operations), and proactively seeks opportunities to invest in projects that reduce carbon emissions and develop solutions for climate change <u>aiub.edu</u> <u>aiub.edu</u>. This means that even at the financial decision-making level, AIUB's leadership considers biodiversity and land impact – essentially practicing **ethical stewardship** of resources that parallels land stewardship. Additionally, AIUB's Sustainable Investment Policy aligns with the United Nations' Higher Education Sustainability Initiative (HESI), reinforcing its commitment to the SDGs and environmental accountability <u>aiub.edu</u>.

On the operations side, AIUB has implemented a *Sustainable Procurement Policy* to ensure that everyday purchases and contracts are in line with sustainability principles. This policy emphasizes the selection of products and services that minimize environmental impact – for

instance, preferring local and organic produce (supporting sustainable agriculture), reducing waste through reusable or minimal packaging, and requiring energy-efficient equipment aiub.edu. By favoring local produce and eco-friendly goods, AIUB indirectly supports sustainable land use practices beyond the campus, such as organic farming and reduced transportation footprints. The procurement guidelines also encourage waste reduction (less packaging, electronic processes to save paper) which helps decrease the university's contribution to land pollution aiub.edu. Through such procurement rules, AIUB demonstrates institutional leadership in responsible consumption and production (SDG 12), which complements its SDG 15 efforts by reducing strain on landfills and demand for resource extraction.

planning. AIUB ensures that new campus developments or expansions do not come at the cost of local ecology. As noted earlier, the university makes it a point to incorporate local biodiversity in its landscaping and infrastructure projects aiub.edu. This could involve conducting environmental impact assessments before construction, preserving existing mature trees during campus development, or creating green buffers. By institutional policy, AIUB aims to maintain or increase its green cover even as it grows, avoiding the common pitfall of urban expansion that often leads to loss of trees and open land. Furthermore, AIUB's safety and operational protocols likely include measures for chemical use, hazardous waste disposal, and emissions control – all of which protect soil and land health. Indeed, AIUB has integrated waste management systems to reduce plastic waste and ensure hazardous materials are disposed of in an eco-friendly manner, so as not to contaminate land or water aiub.edu. This comprehensive approach to campus operations safeguards terrestrial and aquatic ecosystems from pollution.

Finally, AIUB fosters a culture of sustainability through continuous education and governance. Training programs and workshops on environmental aspects of sustainability are provided to students and staff aiub.edu aiub.edu, cultivating environmental literacy and empowering the community to participate in policy implementation. The university's Institutional Quality Assurance Cell (IQAC) and other committees oversee the alignment of academics and extracurricular activities with SDGs, ensuring that policies like the Climate Action Plan are translated into real action and curriculum enhancements aiub.edu aiub.edu. AIUB's administration publicly affirms that it "believes in ensuring environmental sustainability, social responsibility, and accountable governance" as core values aiub.edu. This ethos is echoed in codes of conduct and strategic plans, embedding sustainability and integrity into decision-making at all levels. In sum, through robust policies on sustainability, investment, procurement, and campus planning, AIUB has institutionalized its commitment to environmental stewardship and land conservation. These policies not only guide the university's own practices (preventing deforestation on campus, promoting biodiversity, reducing waste) but also set an example for students and partners to carry these principles into society.

Conclusion

AIUB's multifaceted efforts towards SDG 15: Life on Land demonstrate a profound institutional commitment to preserving terrestrial ecosystems and promoting sustainable land use. From hands-on tree-planting drives that involve students and local communities, to pioneering research in sustainable agriculture and wildlife conservation, the university actively contributes to protecting biodiversity and improving environmental management practices. AIUB's campus itself embodies green principles, integrating native species and green spaces

to create a living model of sustainability. Through outreach and partnerships, the university amplifies its impact, working with schools, NGOs, government bodies, and global networks to advance conservation initiatives beyond its own grounds. Importantly, all these endeavors are reinforced by AIUB's strategic policies and governance that prioritize environmental sustainability and ethical stewardship of resources. **American International University–Bangladesh's holistic approach to SDG 15** – encompassing education, research, operations, and community engagement – clearly underlines its role as a leader in fostering a sustainable relationship between people and the land. This comprehensive commitment not only enhances AIUB's standing in the Times Higher Education Impact Rankings but, more significantly, contributes to the greener and more sustainable future that SDG 15 envisions for our planet's terrestrial life.