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**Higher Education Sustainability Initiatives [HESI]: A
Case Study on the American International University –
Bangladesh [AIUB] and the Local Perspective**

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Abstract

“Sustainability” has been one of the most monopolizing ‘buzz word’ in recent times, that has gone global. The very concept has evolved over time, gradually realizing its significance from various industries, different households, to the entire governance and infrastructure of nations across borders. It has diversified its meaning, however, donning on multiple facets of ‘sustainability’. More and more individuals and entities, whether it be consumers or corporations, have started thinking on issues related to health, society, and the environment as a whole. This trend seems to go a long way, especially when it comes to organizations and institutions, spanning through a wide range of genres.

It has grown in its importance. It no longer holds just ethical or moral values, but this even adds to the cost of doing business, the impact of each person as a global citizen, and not to mention, the future of our planet that hangs in the boughs as we know it. Given the socio-economic and political scenario, the South Asian region is only beginning to catch up to the idea of how such actions affect the lives of its people. Traditionally, generations have been involved in ‘*servicing the community*’ through the ‘*volunteering*’, ‘*charitable donations*’, ‘*social welfare & development*’ etc. for decades, but the scales and scope were limited in their reach and, with the lack of proper guidance and literacy, the efforts and approaches were incohesive and incoherent to have any real impression or influence on the local level. In time, if the population can be educated in masses, and not just encourage but rather enabled to contribute towards the global landscape of sustainability, perhaps we can power through climate change, not just in the South Asian region but internationally in the global landscape.

Education for all has always been an integral part of the sustainable development agenda. There is growing international recognition of Education for Sustainable Development (ESD) as an integral element of quality education and a key enabler for sustainable development. Over two years ago, an unprecedented number of higher education institutions (HEI) from all corners of the globe assembled on a single platform to collaboratively champion education, research and actions for sustainable development in the Higher Education Sustainability Initiative (HESI) of the United Nations Conference on Sustainable Development (Rio+20), held in Rio de Janeiro, Brazil, in July 2012. Although education is a dedicated sustainable development goal 4 - "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" – with a set of associated targets, it is also a key driver for achieving many of the other sustainable development goals. Established as an unprompted initiative for sustainable development, HESI for Rio+20 aims to get institutions of higher education to commit to teach sustainable development concepts, encourage. Contributions from higher education institutions part of the Higher Education Sustainability Initiative are sought, in responding to the pressing current issues of climate change.

1. Introduction

Climate change is very real. It is a pressing matter of grave importance that demands global attention and action. But acknowledgement can only take it so far; getting any significant traction requires joint efforts from people and organizations across borders. And not just in terms of the obvious choices, like environmental agencies that are directly relevant, but rather spanning throughout the societal system, covering governance, infrastructure, and yes, education. In 2005, UNESCO launched the United Nations Decade of Education for Sustainable Development [ESD], to reestablish the emphasis on the pivotal role that education plays in shaping the ideas and initiatives undertaken for sustainable growth and development. Following the efforts for the Decade of ESD (2005-2014), the Global Action Program (GAP) on ESD was set up as an attempt to generate and scale up proactive responses throughout the spectral ranges of education, to catalyze the process of sustainable development and pave the path towards the promising changes it embodies in the future.

The program identified five focal issues that are crucial to the advancement of ESD goals: policy support, whole-institution approaches, educators, youth, and local communities. Through the Higher Education Sustainability Initiatives [HESI], definite progress has been made in addressing these factors that have a significant impact on the overall integration of sustainable development in its entirety. In Rio+20, HESI facilitated the commitments of 272 organizations from 47 countries, representing 36% of all the commitments that were made at the Conference. The commitments acclimated a diverse mix of educational institutions, of a number of different geographic locations, institutional reach and even their prior experience with sustainable development. Those with existing practices of sustainable development pledged to improve their efforts and forward the learning to those who were at the embryo phase of contributing to the cause and join the global movement.

2. Sustainable Development: A Bangladeshi Perspective

Looking back on our history and heritage, sustainability would have never occurred to our forefathers as a cause for concern. Given our agro-based economic culture, to a certain extent, we have been quite self-sustained in the past, at least in terms of our basic needs for survival. But as the industrial revolution transpired, contagiously spreading throughout the globe, one country at a time, with the pursuit of progress, it triggered a

domino effect of changes. From coal to fuel to natural gas, greenhouse emissions unleashed major shifts in the natural environmental patterns of the Earth. Ozone layer depletion, global warming, and undoubtedly the persistent climate change is just a few of the alarming notions caused by this that the world needs to deal with. And like every other country in the world that's affected by this, Bangladesh is one of them.

Bangladesh has been moving towards transitioning into the status of a middle-income country [MIC] from the existing least-developed country [LDC]. And a factor that has been one of the prime focuses in this advancement has been sustainable development. In recent years, many efforts have been imbued by the government through its different ministries and agencies, and even by several private institutions, corporations, and foreign affiliates, in order to amalgamate the entire nation onwards in realizing the development goals of Bangladesh. In an attempt to conserve and preserve its environmental sustainability, Bangladesh has been utilizing its own scarce resources very carefully, restraining itself within the framework of the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), since July 2009. The Bangladesh Climate Change Trust Fund (BCCTF) was sanctioned funds of approximately \$300 million over the past three years from the national budgetary allocations, while the Bangladesh Climate Change Resilience Fund (BCCRF) generated funds through contributions of their development partners amounting to almost \$170 million) for the purpose of fueling the nation's sustainable development projects. Bangladesh has also been an active participant in the international conversation of the changes and its consequent attempts in mediating its impact on the global environment. Bangladesh has been collaborating countries vulnerable to the changes, especially other LDCs, Small Island Development States [SIDS], and similar African nations, guiding them through the challenges Bangladesh itself faced in its route to sustainable development.

By its very place in the world map, Bangladesh is prone to the desolating repercussions of climate change, being at a constant threat from increasing sea levels, salinity ingress, storm surges, cyclones, floods, loss of habitat, destabilization of agriculture, etc. It is not a battle that can be won, at least not by fighting it alone. The country is limited within its own means of sustenance, and given the diminishing resources and lack of expertise, the scope for improving its existing circumstances is greatly restricted. The self-support can only go so far. It's too little compared to the overwhelming need, and that only stresses the importance of international cooperation

further. To even begin considering how long developing weather-prone countries like Bangladesh can continue adapting to survive on their own in this combat with climate change, questions the role developed countries can play in either making things better or worse. The changes are erratically growing to become irreversible in time, and if prevention isn't made a priority right now, protection will become the only viable option soon.

2.1. Initiatives for Sustainability in the Context of Bangladesh

The overall governance of the plans and policies are integrated into a multi-faceted system that interacts and impacts one another nationwide. Although their scales may be limited, their reach and scope have immense potential to go further, but that requires a consistent approach throughout the different channels within the local community, along with long-term cooperative collaboration on the global front through the current and possible future liaisons in the international network.

Strengthening the foundation of the infrastructure, an institutional cell has been created solely to address the climate change. The Climate Change Cell [CCC] in the Department of Environment [DoE], is responsible for continuously monitoring and evaluating the present efforts and future endeavors, while providing productive feedback and technical support to the Ministry of Environment & Forests [MoEF] on the progress and related issues as they come up. A Climate Change Unit has also been set up in the MoEF to support the CCC with its operations, coordinating with the correlated ministries and departmental agencies, together with the other civil experts on climate change and its effects.

Goals have been set by the government to provide electricity at affordable prices to all by 2020, ensuring reliable supply through the development of renewable energy sources through fuel diversification, a policy adopted in 2009. The idea was to emphasize both private and public sector investments in order to reach the vision that 10% of the total energy production will be achieved by 2020. The “500 MW Solar Power Mission”, is amongst some of the many programs launched to encourage the use of renewable energy to meet the escalating demands of electricity in Bangladesh.

Over 50 solar power projects are already underway, supporting sustainable development goals across the country. Around 10 additional wind power, hydro, and other hybrid projects are also in motion, while various measures have been taken to ensure energy efficiency and

conservation, like the Compact Fluorescent Lamp [CFL] Distribution Program, implementation of heat reflective glass for passive cooling in commercial buildings, replacement of diesel/electricity-run equipment with solar-powered ones, and even including sustainability into academic courses and textbooks throughout schools, colleges, and universities. Research has long been a priority in this case, discovering new approaches towards sustainable development and executing different prototypes for realizing the capacities of each innovative concept to scale up national efforts.

If implemented properly and reviewed carefully through trial-and-error models, these plans and policies can go a long way in aiding Bangladesh to achieve its sustainable development goals. The process is painstakingly slow, and any real progress takes time, but with a little help from the global powers, if kept at it, once the breaking point is surpassed, the pace can be accelerated, sending the country leap-frogging through the technological and socio-economic barriers, eventually lubricating its way out of the clogged bottlenecks in the system to establish a positive shift in the environmental predicament to renew social welfare with sustainability and contemporary reforms.

3. A Case Study On The Sustainability Initiatives At The American International University – Bangladesh [AIUB]

The current report has been prepared by the American International University – Bangladesh [AIUB], through its Office of International Affairs, in collaboration with the various departments, academic and otherwise, involved in the practices and policies of sustainable development. The report was presented on the occasion of the event “IAUP Semi-Annual Meeting 2016”, held at the University of Alcalá[UAH], Madrid, Spain, from the 19th – 21st of March 2016, headed by UAH’s Rector Fernando Galván, and organized by the partners of the HESI initiative in close collaboration with IAUP and the University of Alcalá, one of the signatories of the HESI initiative. In the process of preparing the report, AIUB reached out to the different academic departments and administrative offices within the institution, seeking concrete details of the existing practices relevant to climate change action in terms of teaching, research, outreach, or greening their campuses, currently in practice at the university. In addition, a basic research was conducted to identify the initiatives undertaken by the concerned Ministers and Governing Bodies that acknowledge and strengthen the role educational institutions play in addressing current issues of climate change, along with fulfilling their own role in the process.

3.1. Sustainable Development at the AIUB

The American International University – Bangladesh [AIUB], one of the most renowned private universities in the country, has long made its mark in developing the quality of education over the years, staying true to their motto, “Where Leaders Are Created”.

Established back in 1994, by an idealistic leader himself, Late Dr. Anwarul Abedin, AIUB has continuously pursued excellence in all its practices, whether it was in terms of their academic achievements, their co-curricular programs, or even the various efforts made towards research and social welfare. With a diverse pool of over 10,000 students spread across its internationally accredited programs in 4 distinct Faculties of Business Administration [FBA], Engineering [FE], Sciences & Information Technology [FSIT], and Arts & Social Sciences [FASS], AIUB has always maintained a strong presence, both nationally and internationally, by means of their numerous networks and linkages. It is with this very perseverance that AIUB remains as one of the front runners in the evolving platform of education in Bangladesh.

AIUB envisions to promote professional and excellent leadership, catering to the technological progress and development needs of the country. Today, it is essential to be proactively responsive to the emerging challenges around the world, and for that, AIUB has been consistently pursuing sustainable development and progressive growth through various efforts of the university. AIUB continues to upgrade their academic and administrative approaches to accommodate the changing needs of the society that the students graduate to serve. The institution has always prioritized research consciousness in a diverse set of fields throughout the curriculum, enriching business ethics, social issues, as well as engineering and technological advancements. AIUB strives to remain relevant in enriching the community outreach programs reflective of the available resources and expertise of the university.

As a part of their battle climate change through their sustainability initiatives, AIUB has implemented and integrated a number of efforts into various levels of the academic and administrative fronts. AIUB covers a multitude of issues relevant to sustainable development, throughout its various programs in all 4 faculties of business, social sciences, engineering, and information technology, practiced in various forms of teaching, ranging from conceptual frameworks in theory, real-life applications studied through case analysis, researches undertaken in different fields, and discussion

sessions in seminars & workshops. The university has even taken numerous initiatives towards “greening” both the current and future campus buildings, ranging from minor changes in administrative practices to major implementations in infrastructure, across the board in all its respective offices.

Curriculum

- ***Masters in Development Studies [MDS] Program of the Faculty of Arts and Social Sciences, <http://fass.aiub.edu/masters-in-development-studies>***

“The MDS Program focuses on developing professionals with a solid grounding in social and economic principles and equips them with the knowledge and skills needed to build on this through detail study of specific development issues. The objective of MDS is to produce professionals with technical capabilities to deal with evolving development priorities of the less developed nation under the complex socio-cultural environment.” The program offers courses on Development Economics, Globalization, NGO & Social Entrepreneurship, Poverty Studies & Policy Analysis, Project Planning, Monitoring, & Evaluation, Social Innovation, Social Services Management, Corporate Social Responsibility, and Climate Change & Disaster Management.

- ***Covered in Several Core And Major Course in the Faculty of Business Administration***

Starting from the freshmen year in Introduction to Business, topics such as corporate social responsibility, environmental changes, and sustainability are cover in a number of different subjects throughout the Undergraduate & Graduate programs, as various lectures address issues like responsible sourcing, lean manufacturing, global practices, etc.

- ***3 2-credit courses on “Environment and Design” in the Undergraduate Program of Architecture and a 3-credit course on “Renewable Energy Technology” in Undergraduate Program of Electrical and Electronics Engineering from the Faculty of Engineering***

- ***Case Study on Agribusiness, “Managing sustainable sourcing in the retail sector”***

A case study of Marks & Spencer’s Plan A, a 5-Year Corporate Social Responsibility Program, entailing their agribusiness sourcing practices that proposes to substantially increase M&S’s sourcing of sustainable raw materials with a particular focus on agriculture, marine, and freshwater issues.

- ***Case Study on International Business, “A Case About Ethics in Sourcing” and “The Polluter’s Dilemma”***

A case study on ‘Fashionforward!’, an online auction that highlights the notion of being easy on the wallet or easy on the earth. Another on an environmental compliance manager who needs to decide whether or not to adopt a new technology that would reduce a particular toxin from the wastewater of their plastics production.

- ***Case Study on Management, “International NGOs”***

A compilation of 4 cases, “Food for the children – or bribes for the Minister of Education”, a case that focuses on an international NGO and its operations in Papua Tuya, “Combating AIDS can be fun— or not?”, a case that covers President Clinton’s AIDS Awareness Campaign, “Human rights or human wrongs?”, a case on the international human rights organization, ‘Human Rights Watchout’ targeting work ethics of children and minority groups, and “The high cost of doing good”, a case on ‘Winds of Change’, an international hurricane relief agency.

- ***Case Study on Marketing, “Levi’s Water<Less Jeans Campaign”***

A case study on the promotion of the Water<Less Jeans Collection of Levi’s, a change in practices that reduces the usage of water in production.

- ***Case Study on Operations Management, “CSR & Project Management” and “Green Projects”***

A case study on the debate between a Canadian mining company that failed to comply with its international human rights and environmental standards in their operations in South America.

Research

Over 70 distinct research projects undertaken since 2012 as a part of ISEED – AIUB, an initiative taken from the Faculty of Engineering, focusing primarily on sustainable energy related issues and challenges of today.

- Rashid Ahammed Ferdaus, Mahir Asif Mohammed, Sanzidur Rahman, Sayedus Salehin, and Mohammad Abdul Mannan, ***“Energy Efficient Hybrid Dual Axis Solar Tracking System,”***Journal of Renewable Energy (Hindawi Publishing Corporation), Volume 2014, Article ID 629717, 12 pages, 2014.
- Subrata Biswas, Mubinul Haque, Arafat Kabir, Md. Iftekhar Alam, Avijeet Banik, ***“PC Based Low Cost Energy Meter Billing System for Home and Commercial Buildings”***, International Journal of Scientific & Engineering Research, ISSN 2229-5518, Volume 5, Issue 1, January-2014.
- Sanzidur Rahman, Rashid Ahammed Ferdaus, Mohammad Abdul Mannan, Mahir Asif Mohammed, ***“Design & Implementation of a Dual Axis Solar Tracking System”***, American Academic & Scholarly Research Journal, Vol. 5, No. 1, pp. 47 – 54, Jan. 2013.
- Molla Shahadat Hossain Lipu, Taskin Jamal; ***“Techno-economic Analysis of Solar Concentrating Power (CSP) in Bangladesh”***; International Journal of Advanced Renewable Energy Research, Volume 2, Issue 5, pp. 75-762, 2013.
- Molla Shahadat Hossain Lipu, Taskin Jamal, Muhammad Ahad Rahman Miah; ***“Barriers to Energy Access in the Urban Poor Areas of Dhaka, Bangladesh: Analysis of Present Stuation and Recommendations”***; International Journal of Energy Economics and Policy, Volume 3, No. 4, pp. 395-411, September 2013.
- Molla Shahadat Hossain Lipu, Taskin Jamal, Tahia Fahrin Karim; ***“An approach towards sustainable energy performance by green building: a review of current features, benefits and barriers”***; International Journal of Renewable and Sustainable Energy, Volume 2, Issue 4, pp. 180-190, August, 2013.
- 2. T. Ali, M. O. Faruk, S. D. Gupta, K. Hasan, ***“Perspective and Prospect of Tidal Energy in Bangladesh”***, International Journal of

Scientific & Engineering Research, Volume 3, Issue 7, ISSN 2229-5518, July, 2012.

Study Tours, Seminars, & Workshops

- ***Study Tour from the Department of Architecture to the GP House & EBL Head Office***, to explore a new paradigm of green architecture in Bangladesh.
- ***A 3-Day Workshop on ‘Safe Sanitation for our Habitat: Strategies for Architects’*** that addressed challenges faced and the significance of low-income housing and sustainable construction of infrastructure through urban and rural planning and policy developments.
- ***2nd Place Win for the Architecture Team’s Participation in the ‘Urban Revitalization of Mass Housing Design Competition 2014’***, organized by UN-Habitat, that promoted advance planning for construction to minimize the impact of urban sprawl, improve mobility, and reduce greenhouse emissions.
- ***Informational Seminar on the 4th International Holcim Awards Competition***, on the contribution of projects and ideas that envision a more sustainably built environment.
- ***Seminar on ‘Global Climate Change & Ethics’***, organized by the Department of Public Health on the occasion of the World Environment Day.
- ***Launch of the ‘Green Rule’ Initiative***, by the Engineering Students Association of Bangladesh [ESAB] AIUB Unit Face, with the aim to not only spread awareness on the greenhouse effects and global warming, but invite students to come up with their own innovative engineering ideas and solutions.
- ***Seminar on ‘Solar Energy in Bangladesh: Prospects, Challenges, & Research’***, organized by ESAB AIUB Unit Face as a part of their Green Rule Project
- ***Student Project, ‘Earthquake Monitoring & Warning System’ wins the Best Innovative Project of the Year at the Bangladesh ICT EXPO 2015***, for their created, submitted, and exhibited by the students of the EEE Department.

- ***Seminar on ‘Renewable Energy Technology: An Overview’***, organized by the IEEE AIUB Student Branch
- ***A Day-long Global Workshop promoting sustainable development***, an UN initiative called Pyramid 2012, conducted by the Department of Architecture, that created awareness as well as engaged students to the Rio+20 Summit objectives.
- ***Study Tour to Karnafuli Hydro Power Station & Paper Mills***, organized by the EEE Department, to learn more about the clean and sustainable energy resource.
- ***Launch of the Bangladesh Green Building Council [BGBC]***, which hosted a roundtable forum discussion on the major issues of green building in Bangladesh.
- ***Day-long Celebration of the World Environment Day***, by the Department of Marketing, covering topics like new business models, sustainable development, and of course, climate change.
- ***Seminar on ‘Sustainable Tourism’***, arranged for the Department of Tourism & Hospitality Management, addressing the existing industry practices and lessons learnt in the development process.
- ***Presentation of the ‘Holcim Green Built Bangladesh’***, showcasing the company’s projects and ideas on sustainable performance in the building materials industry to the Department of Architecture that they visited.

3.2. Campus Infrastructure

- ***Solar panels and hydro-electricity*** used in the architecture of the future campus, as well as other sister concerns of AIUB, including the operations and infrastructure of American Dairy Limited [ADL] in Sreepur.
- ***Preservation and plantation of trees*** in both current and future campuses, making it a point to not dispose of plantation or trees that have naturally grown in or around the campus buildings and encourage further plantation of trees in the existing spaces and allotted land for future preservation of nature.
- ***Recycling paper wastage*** by reusing in administrative offices for printing or photocopying paperwork for internal communication or

temporary records & documentation. Employees are also encouraged to select double-sided black-and-white printing whenever possible, reuse scrap paper wherever feasible, and reduce the amount of printouts made by utilizing online applications. Internal communication is heavily based on email or PABX. The previously common practice of providing hard copies of lecture handouts to the students have been forsaken since 2010, now relying more on VUES, the internally developed interface easily accessible by the students, where all the course related notes and notices are uploaded for their guidance and reference throughout the curriculum. The library also accepts old books as donations from students, alumni, and faculty members, while the internal bookstore buys back and resells old books from the prior semesters for the following batch of students.

Partner Collaborations

- *Memorandum of Understanding [MoU] signed with Habitat for Humanity International – Bangladesh [HFHI-B]*, through the Department of Architecture, to promote cooperation in education and research towards institutional capacity-building and sustainable community development.
- *Institute of Sustainable Energy Environment and Development [ISEED] – AIUB*, providing degree and non-degree academic programs, performing research & development training for upgrading competence of professionals & practitioners.
- *Student Participation at the AUAP-Gastech Conference & Exhibition, Singapore EXPO, 28th Edition*, as the only representative from Bangladesh in a platform that addressed trending issues of evolving technology, natural gas and the LNG supply chain altogether.
- *MoU signed with the Food & Agriculture Organization [FAO]*, to work on several issues relevant to food security in Bangladesh, especially in the wetland ecosystems known as the Haor areas, jointly addressing the possible resolutions to pursue together with AIUB.

4. Concluding Statements

Given the guidelines from Rio+20, the commitments AIUB had promised to uphold through HESI has been undertaken if not completely fulfilled as yet. The university has long been incorporating evolving concepts of sustainable developing into its curriculums across faculties. Research has always been given priority at AIUB, and those on such relevant issues have been furthered in its scopes and scales within the institution's academic reach. The current campuses have been 'greened' to the best of its possible abilities, with an increased focus on doing it better in the future permanent campus, it's construction already being underway. AIUB has always been a frontrunner in supporting social welfare and its causes, throughout its academic and administrative departments, while encouraging it even more within the student community through the Social Welfare Club, 'Shomoy', actively created awareness and initiating efforts towards constructive solutions that are pertinent to our surroundings and immediate environment in Bangladesh. And now, with the help of IAUP, the UN, and the remarkable efforts of HESI itself, AIUB is well on its way in engaging with its international networks to stimulate and disseminate the learnings from addressing the very real issue of climate change and doing the part of taken every active measure in protecting, evaluating, and controlling the growing changes sustainable development, not just within the local communities in Dhaka, but go above and beyond reproach to extend the impact and influence of these initiatives throughout Bangladesh and hopefully contribute as a global citizen to the challenges faced in the world today, together.

Endnoteⁱ

ⁱ This paper is based on the presentation given by Dr. Lamagna on the 2nd day of the IAUP Semi-Annual Meeting 2016, held from the 19th – 21st of May 2016, at the University of Alcalá [UAH] in Madrid, Spain.

