American International University-Bangladesh (AIUB)

SDG Activity Report 2023

SDG 6: Clean Water and Sanitation

Ensure availability and sustainable management of water and sanitation for all



American International University-Bangladesh (AIUB) is committed to Sustainable Development Goal 6 by promoting sustainable water management and providing access to clean water. AIUB implements processes to monitor water consumption per person and ensures efficient use of resources. The university provides free drinking water through fountains for students, staff, and visitors, ensuring access to safe hydration facilities.

Through the Dr. Anwarul Abedin Lecture Series, AIUB educates its community on topics such as "Advancing Water, Sanitation, and Hygiene (WASH) through ICT Solutions", raising awareness about sustainable water usage. Additionally, visits to industrial facilities like Coca-Cola Bangladesh Beverages and Kaptai Hydro Power Plant offer students practical insights into water management and conservation. These initiatives underline AIUB's proactive role in promoting water sustainability both on and off campus, contributing significantly to SDG-6.

#AIUB #SDG6 #CleanWater #Sustainability #WaterConservation

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University Activities towards SDG 6

Dr. Anwarul Abedin Lecture Series on "Advancing Water, Sanitation and Hygiene (WASH) through ICT Solutions."

On July 25, 2023, Faculty of Engineering, AIUB organized Dr. Anwarul Abedin Lecture Series on "Advancing Water, Sanitation and Hygiene (WASH) through ICT Solutions" in the Auditorium of AIUB at 3 PM. The seminar was organized in the honour of AIUB's visionary Founder Chairman Dr. Anwarul Abedin who catalysed substantial transformation in the educational sector of the country.

The event was inaugurated by Prof. Dr. Md. Abdur Rahman, (Pro-Vice Chancellor, AIUB), where he shared information about the implementation of ICT in various sectors along with Water, Sanitation and Hygiene. Following that, the distinguished speaker Ms. Hasin Jahan, (Country Director, WaterAid Bangladesh), was warmly welcomed by the audience. She explained about data management and monitoring, mobile applications, smart water management, clean water and sanitation, modernized public toilet, technological advancement, the public toilet app and its features, menstrual health & hygiene management, nanya-The MHM App and its features, Integrated Municipal Information System, area based water tariff model, all these things which are implemented by WaterAid Bangladesh. The speaker also declared a 'Wash Innovation Contest' among all event participants.

Then, a short Q/A session was held for the participants. Finally honorable Prof. Dr. A B M Siddique Hossain, (Professor & Dean, Faculty of Engineering, AIUB) concluded the session with his closing remarks and handed over token of appreciation to the distinguished speaker.

https://www.aiub.edu/dr-anwarul-abedin-lecture-series-on--advancing-water-sanitation-andhygiene-wash-through-ict-solutions



Marketing Students' visit to Coca-Cola Bangladesh Beverages Limited

The Department of Marketing, Faculty of Business Administration (FBA), AIUB, organized a study visit to Coca-Cola Bangladesh Beverages (CCBB) Limited's Bottling Plant in Bhaluka, Mymensingh, on April 01, 2023. As a part of the regular student development program, students from the marketing major courses of 'Sales Management' and 'Product Innovation and Management,' along with their faculty members, went on to visit the factory to get some practical insights about the plant operations, warehousing, sales & distribution processes of this renowned company.

Coca-Cola Bangladesh Beverages (CCBB) is engaged in manufacturing, bottling, packaging, sales, distribution, marketing, and supply of beverages and packaged drinking water under various trademark brands such as Coca-Cola, Sprite, Fanta, Kinley, and other brands owned by the parent company 'The Coca-Cola Company' (TCCC), Atlanta, USA. CCBB is a wholly-owned subsidiary and an authorized bottler of TCCC to market and distributes such beverage brands in Bangladesh.

Upon arrival at the Factory premises, Mr. Abdullah Al Ahad, Executive – Factory HR, greeted the students and the faculty members. The visitors were accompanied to a brief session about company history, brands & product line information, plant safety issues, warehousing, and the supply chain functions by Mr. Kazi Mohammad Arif Moin Uddin, Head - External Affairs. He also addressed the students' queries and responded in detail.

After the session, the students visited the different Carbonated Soft Drinks (CSD) production lines under the supervision of Mr. Muhammad Mehedi Hasan, Deputy Manager, Project & Maintenance (an Alumna of FE, AIUB), and Mr. Mohammad Raisul Islam, Executive - Micro IPQP. The officials then explained the total production process, starting from water treatment to the distribution of products to the visiting team. The students participated with great enthusiasm and learning aptitude in understanding the different functions of plant operations. At the closing, the faculty members expressed their vote of appreciation to the company officials and presented gift packs, respectively, on behalf of AIUB.

Mr. Hamidul Islam Hamid, and Mr. Stanley Rodrick, Senior Assistant Professors from the Department of Marketing, FBA, AIUB, took the initiative in organizing the study visit. The Department of Marketing, FBA, AIUB would like to thank Ms. Taslima Jaigirder, Director, People – Bangladesh, CCBB, and Mr. Sharif Shajib Ahammed, an Alumna of FBA, AIUB, for arranging and facilitating this study visit.

https://www.aiub.edu/marketing-students-visit-to-coca-cola-bangladesh-beverages-limited



Visit to Chittagong Dry Dock Limited (CDDL)

On December 27, 2022, the Faculty of Engineering, American International University – Bangladesh (AIUB) organized a visit to the Chittagong Dry Dock Limited (CDDL), a state-owned limited company and a leading maritime industry of Bangladesh based in Chittagong Port. It is located in East Patenga, Chittagong, Bangladesh and operated by the Bangladesh Navy. 14 teachers from AIUB along with 37 students from Department of EEE and IPE participated in this visit. The team from AIUB reached CDDL at 8:30 AM and stayed there for approximately 3 hours.

Upon their arrival, Commodore Mohammad Maksud Alam ((E), BSP, NUP, BCGM, BCGMS, ndc, psc, BN, Managing Director, CDDL) wholeheartedly greeted the AIUB team. One Assistant Engineer provided a short presentation going over CDDL's company profile, scope of work, repair facilities (dry dock, outfitting jetty, cranes machine/electrical/fabrication shop), achieved certification (IRC, ERC, CCCI, BIAA, DGDP, ISO, Nippon Kaiji Kyokai) etc. Following the presentation, Captain Mahbubur Rahman (GM, CDDL) greeted the AIUB team and answered questions from the audience regarding the future plans of CDDL and career opportunities at CDDL for EEE and IPE students.

Next, Prof. Dr. Md. Abdur Rahman (Pro Vice-Chancellor, AIUB) sincerely thanked the CDDL officials for their cooperation and offered a token of appreciation for their time and support. Then two Assistant Engineers took the visiting team for a guided tour of the dock in two groups and familiarized them with several shops. The fabrication shop contained different sized machinery such as shaper, bender, hydraulic press that are used to cutting, shearing, bending, pressing and rolling sheets and pipes. At the machine shop, the guides showed the team a variety of equipment and machinery necessary for turning, milling, drilling, shaping, boring, honing, grinding as well as different structures such as cranes and furnace. They also showed the dry dock to the team and thoroughly described the process of ship docking and gate operation for letting water in. After viewing the pump house providing water to the different sections of the dock and providing help in case of ship fires, the tour ended with a group photo with all the participants from AIUB.

It was a rewarding experience for the engineering students that provided them valuable insight into the applications of engineering in the shipbuilding industry of Bangladesh.

https://www.aiub.edu/visit-to-chittagong-dry-dock-limited-cddl



AIUB Shomoy Club: The IDEAS Challenge 2K23

We cannot become what we want by remaining what we are. To improve one must change, and to perfect oneself, one must change often. Embracing change is about adopting a growth mindset, and that is abundantly clear in the youth of tomorrow who seem to have the drive to bring about not just change in this community, but a positive one at that. And here at the American International University – Bangladesh (AIUB), that is the notion with which students are nurtured for a better future. And to that end, the AIUB Shomoy Club undertook the initiative of creating a platform that focused on solving issues of social development - The IDEAS Challenge - Innovative Development Efforts & Actions for Sustainability (IDEAS). The 3rd Season of the flagship event, The IDEAS Challenge 2K23 was a resounding success! The event, which was held on 22nd of July 2023 at the AIUB Campus, brought together social innovation ideas of over 350 participants, many accompanied by their respective parents, guardians, and college teachers, in nearly 100 teams in the category of project posters and prototypes, from more than 30 different colleges of Dhaka.

The diversity of the ideas covered a wide range of social issues, ranging from rural development, disadvantaged groups, clean water & sanitation, unemployment, traffic, and e-waste, based on the 'Social Development Goals (SDGs)' of the United Nations. The intense level of competition made it very difficult for the judges to as there were many strong proposals. The panel of judges, that comprised of teachers from the 4 distinct Faculties of Arts & Social Sciences (FASS), Faculty of Business Administration (FBA), Faculty of Engineering (FE), and Faculty of Science & Technology (FST), commended the participants on both their innovative ideas as well as their efforts in its execution. In the poster category, Team 17 from Manarat Dhaka International College, proposed their idea on how to manage food waste using biodegradable plastics, vending machines, and different wastebins, winning the 2nd Runner-Up position. "Capso Clicks" Team from AKM Rahmatullah College, presented their idea of a camera that can be inserted into the GI tract with the options for photos and videos to diagnose diseases like tumors and ulcers, becoming the 1st Runner-Up. The Champion Team was "Beyond Shadows" from Manarat Dhaka International College who presented their idea on mental health by creating multifaceted platforms ranging from academic curriculum, internships, and counselling to break the stigma and support those in need. In the category of prototype, Team 85 from Nirjhor Cantonment Public School & College, won the 2nd Runner-Up position for their idea on SDG implementation, addressing 16 goals through innovative agricultural initiatives and plastic pollution management. Team "Catastrophe Getaway" from Manarat Dhaka International College became the 1st Runner-Up with their idea of introducing inflatable getaway slides and chutes in high-rise buildings for people to escape in case of fire hazards and other catastrophes. And the Team Shikor took the Champion position with their idea of an app that makes gardening and farming in households easy with features like area scanner for sun exposure, real time consultancy for first timers, AI assistance, automated plant watering system, children's gardening kit, vertical gardening tools, etc.

The IDEAS Challenge 2K23 was a great opportunity for students to share their ideas on social development and to learn from each other. Everyone was able to see firsthand the creativity and enthusiasm of the next generation of social innovators. The enthusiasm of the participants proved their clear passion for their ideas as they were eager to share them with the judges and the audience. AIUB takes great pride in its students for continuously innovating creative platforms for the leaders of tomorrow and looks forward to the next season to bear witness to all that these young innovators accomplish in the future.

https://www.aiub.edu/aiub-shomoy-club-the-ideas-challenge-2k23





Visit to Kaptai Hydro Power Plant

On December 28, 2022, the Faculty of Engineering, American International University – Bangladesh (AIUB) organized a visit to the Kaptai Hydro Power Plant located at Kaptai, 65 kilometers upstream from Chittagong in Rangamati District. 14 teachers from AIUB along with 37 students from Department of EEE and IPE participated in this visit. The team from AIUB reached Kaptai at 11 AM and stayed there for approximately 4 hours.

Mr. Mohammad Abul Bashar (Deputy Director, Power Development Board, Kaptai) wholeheartedly greeted the AIUB team upon their arrival. Alumnus of Department of EEE, AIUB Mr. S. M. ZIAUDDIN REGAN (Site Quality Engineer, Andritz Hydro) and Mr. TARIQUL HASAN RAKIB (Site Officer, Supply chain Department, Andritz Hydro)) were also present to welcome the visiting team. The visiting team was taken for a guided tour inside the power plant by Mr. Jalal Uddin (Executive Engineer), Mr. Mahmud Hasan (Executive Engineer), Mr. Md Kaysul Bari (Executive Engineer) and Mr. Avijit Chandra Pal (Deputy Executive Engineer), where the team was provided a brief description on the working of the hydro power plant and its auxiliaries. The guides lead the team around the power house and explained the process by which the river water falls from an elevated level to spin the blades in a turbine, which, in turn, spins the rotor of the generator. The team observed the three-phase synchronous generator and the internal structure of its stator and rotor, the DC motor setup for the electromagnet of the generator, and the cooling system for the different parts of the plant. They also learned how the whole process can be controlled using a SCADA system from the power station control room. Next, the team visited the nearby dam and spillway, and viewed the mechanism for controlling the dam gates. Upon the completion of the site visit, Prof. Dr. Md. Abdur Rahman (Pro Vice-Chancellor, AIUB) thanked the engineers of Kaptai Hydro Power Plant for their proficient guidance and presented the token of appreciation to the officials for their help and cooperation.

After a lunch break, the tour ended with a group photo of all the tour participants from AIUB at River View Cafe and Picnic Spot located near the power station. The tour was a great learning experience for the engineering students that provided firsthand knowledge about the concept of hydropower generation and its practical implementation for supplying the national power grid.

https://www.aiub.edu/visit-to-kaptai-hydro-power-plant





Seminar on "Optical sum frequency and second harmonic generation study of hydrogenated silicon surfaces"

On December 28, 2022, Department of Industrial and Production Engineering (IPE), AIUB organized a seminar titled "Optical sum frequency and second harmonic generation study of hydrogenated silicon surfaces" which was supported by AIUB Community of Engineering Students (ACES). The program started at 2:00 PM with 45 pre-registered participants at Room No. 3202, Annex 3, AIUB. The purpose of the seminar was to provide the students with a clear view about the hydrogenated silicon surfaces and its optical sum frequency and second harmonic generation study.

The program started with the inauguration speech by Prof. Dr. ABM Siddique Hossain (Dean, Faculty of Engineering, AIUB) where the important aspects of material science were discussed. Following that the honorable speaker of the seminar Prof. Dr. Goro Mizutani (Professor, Japan Advanced Institute of Science and Technology, Japan) briefly discussed about the overview of hydrogenated silicon surfaces. He highlighted the construction of an ultra-high vacuum SFG & SHG microscopy spectroscopy system. He concluded his remarks by emphasizing the prospects in this industry. After that, a brief Q&A session was held for the participants. Prof. Dr. Mohammad Abdul Mannan (Director, Faculty of Engineering, AIUB) concluded the seminar by thanking the speaker and presenting a token of appreciation to the speaker.

https://www.aiub.edu/seminar-on-optical-sum-frequency-and-second-harmonic-generationstudy-of-hydrogenated-silicon-surfaces





Visit to Chittagong Port Authority (CPA)

On December 27, 2022, the Faculty of Engineering, American International University – Bangladesh (AIUB) organized a visit to the Chittagong Port Authority (CPA), a government agency for the management, maintenance and governance of the Chittagong Port located on the Karnaphuli River. CPA is located at Bandar Bhaban, Chittagong, and performs the task of managing and maintaining the port facilities and infrastructure. 14 teachers from AIUB along with 37 students from Department of EEE and IPE participated in this visit. The team from AIUB reached CPA at 1:00 PM and stayed there for approximately 2 and a half hours.

Upon the team's arrival, they were welcomed by Rear Admiral M Shahjahan (NPP, BCGMS, ndc, psc, BN, Chairman, CPA) and lead inside the premises, where Capt. Md. Zahirul Islam (Harbour Master, CPA) gave a speech explaining the functions of the port. He explained how the CPA manages, maintains, improves and develops the port, provides port services and facilities, controls the loading and unloading of ships, manages the storage of cargo and works with customs to maintain order in goods import. The presentation was followed by a brief question answer session, after which Prof. Dr. Md. Abdur Rahman (Pro Vice-Chancellor, AIUB) thanked Capt. Md. Zahirul Islam for his informative speech and offered a token of appreciation to the officials for their help and support. Then, the team traveled to the Chittagong port and toured the docks freely, observing the various structures in the port such as containers, harbour cranes, transport trucks and cargo ships.

The tour came to an end with a group photo on the docks of all the members of the visiting team from AIUB. The visit was very informative and familiarized AIUB students with the ship industry of Bangladesh and the role of engineers in it.

https://www.aiub.edu/visit-to-chittagong-port-authority-cpa



Visit to Commodore Superintendent Dockyard (CSD)

On December 26, 2022, the Faculty of Engineering, American International University – Bangladesh (AIUB) organized a visit to the Commodore Superintendent Dockyard (CSD), also known as BN Dockyard. CSD is located at New Mooring, Chattogram, on the bank of river Karnuphuli. 14 teachers from AIUB along with 37 students from Department of EEE and IPE participated in this visit. The team from AIUB reached CSD at 9:30 AM and stayed there for approximately 3 hours.

Commodore Khandakar Akhter Hossain, (E), (NUP, ndc, psc, PhD, BN, CSD) wholeheartedly greeted the AIUB team upon their arrival, and Prof. Dr. Md. Abdur Rahman (Pro Vice-Chancellor, AIUB) thanked the officials of CSD for their support. After a brief group photo, the visiting team was taken for a guided tour to the radar and calibration shops in two groups. At the radar section, the jobs of different sections dedicated to the RF (HF, VHF, UHF) equipment, amplifiers, UPS/IPS, radars (surveillance/tracking/navigation) were explained by the engineers in charge of each section. Following that, the team visited a few labs of the calibration center, where they learned how repair, rework, test and inspection of electronic printed circuit boards (PCBs) of ship equipment is performed. The two groups were next guided to the machine shop that handles the repair DC and induction motors, domestic equipment such as fans/heaters, batteries and distilled water plants. After a short break at the CSD organization, the whole team from AIUB boarded BNS BANGABANDHU, where Captain A N M Ishtiaq Jahan Farouqee, (G), psc, BN, (Commanding Officer of BNS BANGABANDHU) welcomed them on board. Next, Executive Officer Cdr. Md Rashed Hossain, (ND), psc, BN gave a 10-minute presentation explaining the history, functions, armament, sensors, and processing systems of the ship. Following the presentation, executive officers took the visiting team on a guided tour of the ship and familiarized them with several armaments, such as anti-ship missile, surface-to air missile system, rapid compact gun, CIWS (close-in weapon system), torpedo tubes etc. They also pointed out the targeting and detection systems present on the ship, such as fire control radar, surface search radar, MIRADOR optical surveillance and tracking system etc. Next, Prof. Dr. Md. Abdur Rahman sincerely thanked Captain A N M Ishtiaq Jahan Farouqee for his cooperation and shared a token of appreciation for his time and support. The tour ended with a group photo on the BNS Bangabandhu with all the participants from AIUB.

https://www.aiub.edu/visit-to-commodore-superintendent-dockyard-csd



Event News of Walton Industrial Visit

On Thursday (August 10, 2023), the Department of Operations and Supply Chain Management (OSCM) arranged an industrial visit at Walton Hi-Tech Industries PLC. factory, located at Kaliakair, Chandra, Gazipur for the student majoring in OSCM. In the dynamic world of education, where theoretical knowledge often forms the foundation of learning, the role of practical exposure cannot be underestimated. One of the most effective ways to bridge the gap between classroom teachings and real-world applications is through industrial visits. These visits provide students with an opportunity to witness the workflow of industries, gain insights into the processes, and understand the complexities of various sectors. An industrial visit not only enhances the students' understanding but also paves the way for a holistic learning experience. The objective of this event harmoniously aligned with the Sustainable Development Goal of ensuring quality education (SDG 4), Industry, Innovation and Infrastructure (SDG 9) and Responsible Consumption and Production (SDG 12).

Dr. Md. Tamzidul Islam (Dept. Head, OSCM), Ms. Shahnaz Zerin Haque (Assistant Professor, OSCM), Md. Hasibul Islam & Hussein Areefur Rahman (Lecturer, OSCM) were the faculty members to take 23 OSCM major students in this visit. Mr. Kaisarul Islam & Mr. Mamun from Walton were in-charge to receive the group. They first provided a small presentation on Walton's current condition and growth. Later, they took the students & teachers to refrigerator & air-conditioner production line where students got to see facilities and processes of these two production units. Students also got to understand the inventory management system & production flow inside the factory. Later in the afternoon, the group left Walton premises. FBA humbly appreciates the openhanded support extended by the AIUB management.

https://www.aiub.edu/event-news-of-walton-industrial-visit



Study Visit to BBS Cables Limited at Gazipur

On 19th October 2023, AIUB Community of Engineering Students (ACES) arranged a study visit to BBS Cables Ltd. in Sreepur, Gazipur- a renowned cutting-edge technology-based high-quality cable production industry in the country. This visit was attended by a group of 23 students, accompanied by two faculty members of Faculty of Engineering, AIUB.

The faculty members and students were warmly welcomed upon their arrival at the factory. This visit commenced with an illuminating presentation offering an overview of the factory. Subsequently, the participants were granted access to the factory premises under the guidance of expert engineers. During the enlightening session, participants were afforded a close-up view of the indispensable components of the cable industry's infrastructure. This visit provided hands-on experience with critical systems, including PVC, copper, aluminum, domestic cable, LT and HT cables, and compounding plant sections. Besides, they visited the domestic cable testing, PD and HV testing, and optical emission spectrometer labs. The expert engineers explained in detail various issues of factory operations to give insights into this sophisticated cable manufacturing industry and thus improve the participants' knowledge and understanding level.

The program was ended with an interactive discussion session with Engr. Mohammad Badrul Hassan (Managing Director, BBS Cables Ltd.). Mr. Md. Aminur Rahman (General Manager, Plant), Engr. Md. Afjal Hossain (Deputy Manager, Maintenance), Mr. Rathindra Nath Mandal (Deputy Manager, Production), and Engr. Zakaria Parvage (Sr. Production Engineer) were also present and answered several questions asked by the visitors. The faculty members and students extended their appreciation for the outstanding support and assistance provided by the host. To show gratitude and thanks, token of appreciations was presented to Engr. Mohammad Badrul Hassan, on behalf of the AIUB by Prof. Dr. Muhibul Haque Bhuyan, Professor, EEE Department, FE, AIUB. Mr. Tamim Hossain, Lecturer, EEE Department, FE, AIUB.

https://www.aiub.edu/study-visit-to-bbs-cables-limited-at-gazipur



Dr. Anwarul Abedin Lecture Series "SMART Power Flow Controllers – A Necessity for Future Power Grid"

As a part of the "Dr. Anwarul Abedin Lecture Series", a regular development initiative of the American International University-Bangladesh (AIUB), a seminar titled "SMART Power Flow Controllers – A Necessity for Future Power Grid " was organized by Faculty of Engineering (FE). The seminar was presented by renowned researcher Dr. Kalyan Sen (Fellow of IEEE, Fulbright Scholar (US), GIAN Scholar (India), IEEE PES Distinguished Lec.). Dr.Kalyan Sen is also the President & Chief Technology Officer of Sen Engineering Solutions, Inc.

The seminar was held at AIUB Auditorium on February 1, 2023, from 12:30 PM- 2:00 PM with more than 150 participants. Prof. Dr. ABM Siddique Hossain (Professor and Dean, Faculty of Engineering, AIUB) inaugurated the seminar with a welcome speech. He emphasized the importance of power grid control and smart infrastructure in eradicating problems. Following that the honorable speaker of the seminar Dr. Kalyan Sen discussed the history of technology advancement and spoke of his research and academic experiences. He compared traditional power grids vs modern power grids and identified the challenges brought upon by the latter, such as lack of steady power sources, need for bidirectional controllers and complications related to rights-of-way. He clarified the consequences of free power flow by using the 2003 blackout incident that spanned from New York to Canada. He also briefly discussed the role of autotransformers and phase angle regulators. Finally, he discussed the role of SMART power flow controllers (SPFC) in future grids and emphasized the importance of cost-effectiveness, component non-obsolescence and interoperability in designing SPFCs. Prof. Dr. Md. Abdur Rahman (Pro Vice-Chancellor, AIUB) delivered the closing speech and thanked the speaker for his inspiring talk. He also encouraged the students to pursue innovation as engineers. Lastly a token of appreciation was presented to the honorable speaker and a group photo was taken concluding the seminar.

https://www.aiub.edu/dr-anwarul-abedin-lecture-series--smart-power-flow-controllers--anecessity-for-future-power-grid





Seminar on Occupational Health & Safety Management

The Department of Management & HRM, Faculty of Business Administration, organized a seminar on Sunday 13 August, 2023 for the major students of the HRM entitled "Occupational Health & Safety Management". The speaker of the seminar was Md. Khairujjaman, Manager, HRD, Green Life Hospital Limited, conducted the session. The main objective behind the session was to provide a comprehensive understanding of "Occupational Health & Safety (OHS) Management Systems" to the students of Occupational Health & Safety Management course. Mr. Md. Khairujjaman stressed on the management of employee health and safety that has gained paramount importance in today's rapidly evolving business landscape. He also mentioned about the well-being of employees not only aligns with ethical and legal considerations but also contributes significantly to an organization's overall productivity and success.

The seminar was arranged by Dr. Md. Aftab Anwar, Associate Professor & Head, Department of Management & HRM. Dr. Rezbin Nahar, Director of BBA Program, exchanged her views regardings health and safety issues with the esteem guest for future development and sustainability of the organzations. Dr. Partha Prasad Chowdhury, Professor and Head, Department of Marketing concluded the session with vote of thanks. The Department of Management & HRM humbly appreciates the openhanded support extended by the AIUB management.

https://www.aiub.edu/seminar-on-occupational-health--safety-management



Faculty Research and Publication on SDG 6

Smart Monitoring and Control of Water Purification System Using UF Membrane Filtration

MD. SAJID HOSSAIN et el.

Clean, accessible water is critical to human health, a healthy environment, peace, and security. The availability of safe drinking water supplies is a main concern for an overpopulated country like Bangladesh. A large proportion of the population of Bangladesh still does not have access to adequate, clean, and pure water. The scarcity of water poses a major threat to several areas of society, including food security. In this work, we will develop a coin-based water ATM system with ultra membrane filtration that will ensure the availability of pure, fresh, and safe drinking water for a large population at a low cost. Besides, adding GSM features will ensure easy maintenance and monitoring of the system. This device can be used in various crowded and public places like busy roads, highways, railway junctions, shopping malls, etc.

https://ieeexplore.ieee.org/document/10461814/

Current Status and Challenges of Renewable Energy Implementation in Bangladesh

MD. SAJID HOSSAIN et el.

This paper presents an updated assessment of the progress, challenges, and potential solutions for renewable energy-based power generation in Bangladesh. It emphasizes the growing consideration given to renewable energy sources as a practical substitute for fossil fuels in response to the country's rising energy needs and worries about climate change. The study analyses the policies and incentives in place to encourage the growth of renewable energy and looks at the country's progress to date in meeting its renewable energy goals. It also addresses the obstacles faced in adopting renewable energy, such as financing, technical capacity, and regulatory barriers, and explores potential solutions including appropriate financing mechanisms, effective regulatory frameworks, and grid integration. The final section of the paper discusses the prospects for renewable energy in Bangladesh, highlighting the possible advantages it could have for the country's economy, environment, and energy security.

https://ieeexplore.ieee.org/document/10434878

International Conference on International Conference on Rivers of South Asia: Connecting Ecology, People, and Governance

FERDOUSI BEGUM et el.

In contemporary environmental jurisprudence, there is a trend of granting legal personhood to rivers for environmental protection although it could not mitigate the environmental crisis. The High Court of Uttarakhand, India, declared the rivers Ganga, Yamuna, and glaciers to be legal persons in 2017 through the judgments Mohammed Salim v. State of Uttarkhand and Lalit Miglani v. State of Uttarkhand respectively. Following this trend, the High Court Division of the Supreme Court of Bangladesh awarded legal personhood to rivers in 2019 in Human Rights and Peace for Bangladesh v. the Govt. of Bangladesh and Others to prevent encroachment and pollution of the rivers. This paper demonstrates on what basis these rulings are given in these cases and to what extent such rulings help to protect the environment in the era of development. It analyses the emerging environmental jurisprudence of granting legal personhood to rivers in Bangladesh and India in improving environmental protection. The implementation method of these judgments is a way to assess whether the new legal initiative of granting legal personality to rivers improves the existing environmental legal frameworks in Bangladesh and India or not.

http://www.northsouth.edu/sipg/news-and-events/international-conference-on-rivers-ofsouth-asia.html

B–Sn/TiO2 nanoparticles for photodegradation of metronidazole antibiotics under different lights

SHAHRIAR ATIK FAHIM el

A novel B and Sn co-doped TiO2 (B–Sn/TiO2) nanoparticle photocatalyst with different compositions was synthesized using the sol-gel method. The weight ratios of B and Sn in TiO2 were 1:9, 6:6, and 2:3, respectively. The resultant nanoparticles have completed a detailed characterization examination using XRD, FTIR, FESEM-EDS, TEM, UV–vis DRS, PL, BET, Zeta potential, and XPS. The photocatalytic activity of B–Sn/TiO2 nanoparticles was investigated for the degradation of aqueous metronidazole (MNZ) solution with UV-C and natural sunlight irradiation. Among the different compositions of the nanoparticles, B–Sn/TiO2 (1:9) exhibited better photocatalytic activity because of its high charge separation ability, confirmed by significant PL quenching. Under ideal conditions (MNZ concentration of 10 mg/L, pH 9, catalyst dosage of 20 mg), a maximum MNZ removal efficiency of ~96% was obtained in UV-C irradiation within 120 min. However, under the same experimental conditions in natural sunlight, the removal efficiency of MNZ was ~94% in just 60 min. The mineralization of MNZ up to ~53% in 3 h under sunlight was studied from the decrease in TOC values. The scavenger test was used to estimate a plausible photocatalytic degradation mechanism of MNZ, and it was observed that the \bullet O2– radical was potentially active in the degradation of MNZ. Cyclic experiments showed that B–Sn/TiO2 (1:9) was reusable for up to four cycles, confirming that it can be used as a cost-effective and environmentally friendly photocatalyst.

https://www.sciencedirect.com/science/article/abs/pii/S0254058423006454?via%3Dihub