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INTRODUCTION



The Sustainable Development Goals (SDGs), adopted by all United Nations Member States in 2015, represent a universal call to action to end poverty, protect the planet, and ensure peace and prosperity for all by 2030. As an institution of higher learning, Universiti Brunei Darussalam (UBD) recognises its important role in advancing these global goals through its five strategic pillars — Education, Research, Operations and Governance, Infrastructure, and Community Engagement.

Guided by the UBD Sustainability Masterplan, the university integrates the SDGs into its core mission of teaching, research, and service to society. The Masterplan ensures that sustainability is embedded across UBD's ecosystem, fostering environmental stewardship, social responsibility, and innovation among students, staff, and partners.

This report documents UBD's progress and initiatives that contribute to the achievement of the SDGs, highlighting how institutional priorities align with national aspirations and global sustainability agendas. It demonstrates UBD's accountability through evidence-based actions while inspiring collaboration among faculties, offices, students and external partners toward a sustainable campus and community.

Reflecting UBD's ongoing journey of progress and transformation, this report underscores the university's belief that "Sustainability Starts Here" — shaping a more resilient, inclusive, and sustainable future for Brunei Darussalam and beyond.

MESSAGE FROM THE ASSISTANT VICE CHANCELLOR RESEARCH, INNOVATION AND SUSTAINABILITY

Universiti Brunei Darussalam (UBD). sustainability is more than a principle, it is a shared value that shapes how we learn, live and lead. This Sustainability Report reflects our collective journey and enduring commitment to advancing the United Nations Sustainable Development Goals (SDGs) through our 5 pillars education, strategic research. infrastructure, operations and governance and community engagement.

As a research university, UBD continues to champion sustainability-driven research in health innovation, biodiversity, climate change and energy transition — areas that address pressing national priorities and global challenges. At the same time, we embed sustainability into our curriculum and learning experiences, empowering our students to become responsible, purposeful leaders who can drive positive change.

Beyond the classroom and laboratory, our students, staff and researchers actively collaborate with communities, industries and government partners to transform ideas into meaningful action. These partnerships embody our belief that sustainability is not achieved in isolation, but through shared effort, innovation and collective leadership.



Dr Haji Abdul Hanif Bin Dato Paduka Haji Mahadi

Assitant Vice Chancellor Research, Innovation and Sustainability Office of Assistant Vice Chancellor for Research, Innovation and Sustainability, Universiti Brunei Darussalam

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Guided by the UBD Sustainability Masterplan (2025–2030) and aligned with Wawasan Brunei 2035 and the Brunei National Climate Change Policy (BNCCP), our initiatives reaffirm UBD's role as a catalyst for transformation—locally, regionally and globally.

At UBD, we believe that Sustainability Starts Here — with each of us learning with purpose, living with responsibility and leading with impact to create a better, more sustainable future for generations to come.

SUSTAINABILITY MASTERPLAN

The UBD Master Plan marks the university's first step towards a long-term commitment to sustainability. Guided by 5 pillars, it provides a framework for responsible growth and development. The plan focuses on integrating eco-friendly designs, optimising resource use, and enhancing accessibility to create a greener, more inclusive campus. Through this initiative, UBD aims to foster a sustainable environment that benefits students, staff, and the wider community for generations to come.

The Master Plan was created with the following considerations:

Est. 2024



Sustainability Masterplan

Creating a sustainable future through innovation

Aligning our mission with



Read the Master Plan here.

01. Importance of Stakeholder Engagement: A Foundation of Sustainability

At the core of our sustainability plan is a promise to include everyone. We have engaged with students, academic faculty, staff, local communities, and industry partners to gather different viewpoints. These conversations are like a big brainstorming session, making sure our plan matches what the UBD community needs and expects. By including everyone, we are building a sense of shared responsibility that goes beyond just writing down ideas in the masterplan.

02. Following the Data Trail: Navigating the Path to Impact

In a world drowning in information, we know the power of data. Our plan relies on solid evidence, using data to see how our actions impact the environment, society, and the economy. One of our references is the Times Higher Education (THE) Impact Ranking. Whether using numbers or personal stories, we are blending science and real-life experiences. This way, our sustainability plan can adapt to new challenges and opportunities.

O3. United for Global Goals: UN SDGs as our Compass

UBD does not see UN SDGs as mere goals; we see them as a moral duty guiding our every move. Our sustainability plan lines up with specific SDGs, showing our commitment to being part of the global effort for a better world. Each SDG shapes our five focus areas. By connecting our sustainability projects with the SDGs, we are making a local impact and contributing to a global story of everyone chipping in. With these careful and thoughtful approaches, we are setting the stage for a sustainable future that matters here and echoes around the world.



UBD's commitment to sustainability is guided by pillars focusing on five key areas:



PILLAR I: Driving Innovation through Sustainability Research

We are exploring cutting-edge research to add to global knowledge on sustainability, sparking innovation and creating solutions based on evidence.



PILLAR II: Cultivating Sustainability Champions through Transformative Education

By enhancing our curriculum and providing hands-on learning, we are arming students with the tools and perspectives to be positive changemakers.



PILLAR III: Futuring Sustainability through Green Campus

We are making our mark with sustainable practices in our physical space, aiming to minimise our environmental footprint and use resources wisely.



PILLAR IV: Sustainable Stewardship through Visionary Governance

We are committed to transparent and ethical practices, ensuring that sustainability is the heartbeat of UBD, and we're holding ourselves accountable.



PILLAR V: Empowering Sustainable & Resilient Communities through Engagement and Partnership

We are not keeping the goodness to ourselves. UBD is reaching out to local and global communities, teaming up for partnerships and initiatives that spread the benefits of sustainability far and wide.



END POVERTY IN ALL ITS FORMS EVERYWHERE



The module "Sociology of Development" explores the meaning of the concept of development in its various senses, and examines the issues relating to the problems caused by development. This module places development and underdevelopment in local and global context, covering teaching contents such as narratives of sustainable development, political ecology, transnational

capitalism and resource depletion, cultural dimensions of climate change impacts, global environmental governance, ecotourism and challenges to the environment and local livelihoods, conservation and indigenous people, environmental movements and justice, as well as urban environmental inequality. This module is taught under the Sociology and Anthropology Programme at the Faculty of Arts and Social Sciences, UBD.





A pioneering study on measuring poverty in the hydrocarbon-rich state of Brunei Darussalam

Researchers at UBD have published a technical paper providing a pioneering estimation of poverty rates in Brunei, utilising published data from 'Household Expenditure Surveys' and focusing on the basic need approach. Though poverty is not a topic that is politically taboo in Brunei, there are no statistics on poverty in Brunei, yet having such statistics would aid the government in achieving the target of zero



poverty in 2035. This paper calculates monthly household poverty rates based on the World Bank's poverty lines and OECD median income approach, producing poverty rates based on expenditure and income. Employing two models, proportional and refined model, this paper shows declining rates of poverty, regardless of the poverty lines and models.

Read the paper **here**.



END POVERTY IN ALL ITS FORMS EVERYWHERE



Administering and encountering the poor: Poverty from above and below in Brunei Darussalam

Researchers at UBD have published a paper that explores the 'missing middle' between policies to ameliorate poverty of those in need and the experience of poverty. Drawing on interviews with respondent poor(er) households in Brunei's 'water village' of Kampong Ayer and with officials and local leaders, the paper details a complex and well-funded system of support for those in need. It then shows how this impressive architecture of welfare does not always meet the needs of those it seeks to support. Through rendering poverty technical, policies implicitly ascribe persistent destitution as arising from the failure of the poor to take advantage of the opportunities made available to them. The paper then suggests that this gap could be bridged by giving non-governmental organizations (NGOs), social enterprises and informal businesses a greater role in the delivery of support. Kampong Ayer's experience has its parallels in other places and situations: the tendency to bureaucratize poverty and its amelioration; the desire to simplify poverty but complicate programmes for poverty eradication; and the expectation that the onus for adaptation should be on—and with—the poor. When the poor fail to adapt and to respond in the manner desired, they are blamed for their enduring poverty.

Read the paper here.



Focusing on humanitarian efforts and social sustainability, Misi Peduli Palestin is a collaborative event organised by PMUBD (Executive of Community Service & Student Welfare), Student Affairs Section UBD (Spiritual & Community Service Unit), Executive of Religious & Spiritual Affairs, and UBD Volunteering & Charity Club.





Comprising of a donation drive and charity bazaar, this event was aimed to raise funds and support for Palestine. The event also aimed to promote volunteerism, foster a sense of unity, and encourage sustainable community engagement. Donations of over BND 11, 000 were collected from the project and from UBD staff, with funds later donated to the national Brunei Humanitarian Fund for Palestinians in Gaza.



END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE



The module "Anthropology of Food" introduces students to the anthropology of food, with the aim of enhancing their understanding of and capacity to analyse the central importance of food and eating in human societies, both in terms of material processes and as conceptions and beliefs. This module covers teaching contents such as food and human development, the role of food in the evolution of man and human society, historical and contemporary 'food regimes,' commodity chain analyses and the history of particular commodities, food insecurities, security and policy, as well as the effects of globalisation on eating cultures. This module is taught under the Sociology and Anthropology Programme at the Faculty of Arts and Social Sciences, UBD.

Halal and
Tayyiban Food
Security: The Way
Forward for
Brunei
Darussalam

Researchers at UBD have published a chapter evaluating the meaning of food security in Islam and the concepts of halal and tayyiban. This chapter also provides an overview of the potential benefits of incorporating halal and tayyiban into the food security framework of Brunei and some of the attendant policy implications. The issue of food security came to prominence in Brunei Darussalam when supply chains were paralysed for some time due to constraints imposed by the COVID-19 pandemic. Retail shortages were further exacerbated by panic buying behaviour exhibited by consumers; the effects were severe with a reported shortage of poultry and livestock towards the end of 2020. Alongside this was the issue of smuggled meat not recognised by the leading religious authority, Majlis Ugama Islam Brunei (Brunei Islamic Religious Council), and brought into the country without a halal import permit.



Taken together, these issues intensified the need to ensure the goal of achieving halal and good, clean and wholesome (tayyiban) food security for Brunei. There is now an emerging trend to incorporate tayyiban into all stages of halal production and assurance. Halal and tayyiban food security is not only about accessibility and availability of food but also about ensuring that the entire supply chain from farm to table conforms to best halal standards and practices. Incorporating sustainable practices in the halal supply chain provides an opportunity to improve the many aspects of halal production, thus contributing towards a more sustainable and secure food future. Read the paper here.



END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE



Fourth industrial revolution technologies in food security initiatives in small high-income economies

Researchers at UBD have published a paper that explores small, high-income economies' shared challenges in enhancing their domestic food production capabilities, focusing on the nations of Brunei Darussalam, Qatar, and Singapore. Exploring on the the advancements of fourth industrial revolution (4IR) technologies within their agricultural sectors to mitigate food security concerns, this paper employs a five-step systematic literature review method to delve into the food security realm in the chosen small, high-income economies. These prosperous nations grapple with unfavourable agricultural conditions of limited land area and harsh climates, leading to a reliance on diversified imports to meet the growing food demand. While Singapore leads in modernising domestic production, Brunei is making moderate progress, and Qatar is in its nascent stages. Nevertheless, all three countries demonstrate significant progress towards self-sufficiency and resilience amidst global uncertainties. This paper adopts a comparative case study approach to examine the similarities and differences among these three economies facing common agricultural constraints. Read the paper here.



Korban and Aqiqah Ceremony at UBD for Eid 1446H UBD held a Korban and Aqiqah Ceremony on Tuesday, 13 Zulhijjah 1446H / 10 June 2025 at the University Start-Up Centre, Student Affairs Building, in celebration of Eid al-Adha 1446H. The event was jointly organised by the UBD Religious Committee, the Student Affairs Section, and the UBD Students' Association (PMUBD), and was attended by staff, students, and invited guests. The ceremony began with the arrival of the guest of honour, Dr Haji Masairol Haji Masri, Assistant Vice-Chancellor (Industry Engagement and Enterprise Development) and the recitation of Surah Al-Fatihah lead by the Religious Officer, Haji Muhammad Dzulhilmi Haji Moharefandi.



A key highlight of the event was the distribution of Korban and Aqiqah meat, officiated by the guest of honour and further carried out by UBD's Assistant Vice-Chancellors. The act reflected the values of sacrifice, generosity, and unity that define the significance of Eid al-Adha. The event concluded with the recitation of Doa Selamat, marking the end of a meaningful and spiritually enriching occasion. UBD continues to promote Islamic values and community engagement through events such as this, reinforcing its commitment to spiritual growth, compassion, and social responsibility within its campus community.



ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES



The Master of Public Health (MPH) programme at UBD offers relevant, high-value instruction, research and service aimed at enhancing the health of human populations. Its principal focus is on helping public health professionals acquire up-to-date generalist and specialist knowledge, skills and attitude required to effectively and efficiently address present and emerging local, regional and global public health challenges. The MPH programme consists of 3 main concentrations, which are (1) biostatistics and epidemiology, (2) community health nursing, and (3) health promotion.



The "Wawasan Brunei 2035" set a national goal for Brunei Darussalam to become among the 10 countries worldwide for its highly skilled population, top-quality living standards, and dynamic and powerful economy. However, a notable demographic shift characterized by a rapid increase in the older population had foreseen Brunei as one of the fastest aging countries in ASEAN. It is estimated that the population aged older than 65 in Brunei will rise by 13.64% by 2035. This shift is expected to cause a significant societal transformation with the potential influence on financial markets, social welfare, and healthcare. Universities play an important role in consistently engaging in strategic planning to support the well-being of older people through education, research, innovation, healthcare training, policy development and community engagement. This qualitative study will be carried out using semistructured interviews and focused group discussions to explore the perceived knowledge gaps and opportunities perceived by the universities' senior management team members, academics and researchers in their contributions towards the Brunei National Strategies that address agingrelated issues.



The findings are expected to provide a research, innovation and educational framework that are coordinated to align with the government's goals to embrace successful aging.

Read more on the project here.



ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES



Healthy University Roadmap (2025–2028)

UBD Healthy University Working Group is proud to launch the Healthy University Roadmap (2025-2028): Towards a Holistic Campus Life – a comprehensive institutional strategy designed to embed health, safety, and well being into every aspect of university life. Guided by best practices from the ASEAN University Network-Health Promotion Network (AUN-HPN), this roadmap is aligned with Brunei Darussalam's Wawasan 2035, the Ministry of Education's Greening Education Partnership, and the United Nations Sustainable Development Goals (SDGs).

The roadmap adopts an integrated and thematic approach built around four core themes: Building & Resources; Mental & Physical Health; Health Promotion; Zero Tolerance. As a living document, the Healthy University Roadmap will continue to evolve as UBD collectively learns, grows, and strengthens its commitment to fostering a healthy, supportive, and inclusive campus environment.

The Healthy University Roadmap E-book is now available for exploration and reflection on ways to contribute to a holistic and healthy campus environment.

Read the Roadmap here.







UBD Healthy Week

The UBD Healthy Week was held in September 2025, with the theme of "Health Awareness for University Life: Take Charge, Live Healthy." This five-day programme reflects UBD's strong commitment to cultivating a healthy, active, and balanced lifestyle among students, staff, and the community. Organised UniHEALTH: Centre for University Life & Wellness and Campus Asset Management & Planning for University Life (CAMPUs), the initiative acts as a platform for awareness and action. The programme features free health screenings for early detection and prevention, exhibitions and health information booths on lifestyle, nutrition, and wellness, group fitness sessions, cultural competitions to encourage performances, engagement and mental health workshops addressing stress management and emotional resilience. The programme aims to provide campus members and the public with access to screenings health and accurate information, raise awareness on balanced physical activity. nutrition, and stress management.



ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL



Cultivating Sustainability Champions Through Transformative Education

At UBD, the Innovation of Teaching and Learning Centre (Intelect) serves as a hub of innovation dedicated to promoting teaching excellence in education. The centre focuses on enhancing the quality of education through a variety of initiatives, including workshops and training programs designed to empower educators to the latest pedagogical skills and methodologies. By fostering collaboration with local and global industry experts, InTELECT also strengthens the ties between academia and the professional world, ensuring that teaching practices remain relevant and impactful.

The Centre for Lifelong Learning (C3L) at UBD also plays a pivotal role in enhancing the student learning experience by promoting the importance of Lifelong Learning. Guided by the vision of Teaching, Inspiring Lifelong Learning, C3L strives to cultivate a passion for continuous education through various initiatives. These include integrating lifelong learning principles into existing modules, offering specialised programs, and creating activities that foster this mindset among students. C3L also develops Continuing Professional Development (CPD) programs for UBD alumni and non-UBD graduates, allowing individuals to upgrade their skills or explore second careers. Additionally, the Centre offers nonformal learning opportunities for Bruneians and the general public, supporting both personal and professional growth.

UBD ensures that lifelong learning opportunities are accessible to everyone, regardless of ethnicity, religion, disability, socioeconomic status, or gender.





ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL



UBD Discovery Year

The UBD Discovery Year (DY) Programmes stand as a hallmark of undergraduate experience, offering a unique and transformative chapter in students' academic journey. Introduced in the third year, this programme transcends conventional learning by immersing students in hands-on, real-world engagements that cultivate practical knowledge, skills, and perspectives across diverse disciplines. A cornerstone of this

experience is the community outreach program (COP), which plays a crucial role in raising awareness of sustainability issues. It provides students with opportunities to engage in environmental and social challenges, fostering a deeper understanding of sustainable practices. Additionally, it offers a platform for implementing concrete actions to address these challenges, equipping students to confront future global issues. Some of UBD's flagship DY COP activities include collaborations with FPT University, Danang, which aims to establish an effective and sustainable initiative to improve the educational status of disadvantaged communities using local community resources.





TEDx Universiti Brunei Darussalam

UBD hosted the TEDxUniversiti Brunei Darussalam in September, 2024, under the theme "Futuring Together." The event showcased a diverse lineup of seven speakers comprising UBD staff, students and alumni as well as an invited speaker. Topics include the inability of Artificial Intelligence (AI) to fully replace human language learning, sustainable innovation propelled by technology-driven partnerships, the significance of intellectual honesty on the return on investment of companies, the role of the circular economy in business networks, the improvement of inclusion and accessibility for children with special

needs and mental health issues, the importance of digital literacy in promoting a sustainable future, and the significance of sustainable volunteerism in supporting a resilient society.

The TEDx Universiti Brunei Darussalam event continues to exemplify UBD's commitment to community engagement and the sharing of transformative ideas.





ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS



The module "Geographies of Gender and Development" aims to understand the gendered dimension of development mainly in the global south and also to explore the theoretical approaches to gender and development and debates relating to broader issues of development, globalization and social changes. Topics covered by this module include importance of gender in understanding development, main theoretical frameworks relevant to the study of gender and development (gender theories), analysis of gender roles and identities in various developing regions/culture, gender issues relating to reproduction, employment and poverty, policies relating to socio-economic changes, welfare (social security and protection), gender equality/inequality, and empowerment, migration and mobility, as well as roles of women's organizations. This module is taught under the Geography, Environment and Development Programme at the Faculty of Arts and Social Sciences, UBD.



Impacts of Gender, Patriarchy, and Culture on Bruneian Women's Travel Experiences



Researchers at UBD have published an article exploring the interrelationships between gender, patriarchy, culture, and the travel experiences of women in Brunei where Islam plays a central role religiously and culturally.

Limited research has been done on the travel experiences of Asian women living in patriarchal societies, and this paper addresses this gap using intersectionality as a guiding theoretical framework. Semi-structured interviews were conducted with 49 girls and women aged 18 to 64. Findings show that Bruneian men tend to be viewed as breadwinners, providers, protectors, decision makers, and leaders, while women are homemakers, housewives, cooks, care givers, and helpers. Interviewees said they encounter more restrictions than men in terms of travelling for leisure. These are of socio-cultural, religious, and gender-related nature, which cumulatively affect women's holiday choices. While travelling abroad, their multiple identities (female, Muslim, Asian/Malay) often intersect, shaping how they are judged and treated in different cultural contexts.

Read the paper here.



ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN

AND GIRLS



Navigating the Field: Experiences, Challenges, and Aspirations of Female Mathematicians in Brunei Darussalam

This study provides national-level insight into the experiences of female mathematicians in Brunei. It highlights key barriers such as underrepresentation, limited mentorship, and institutional challenges, while also documenting their achievements and aspirations. The findings support the development of gender-responsive policies, stronger professional networks, and initiatives to promote visibility and leadership for women in STEM, aligning with SDG 5 targets on gender equality.

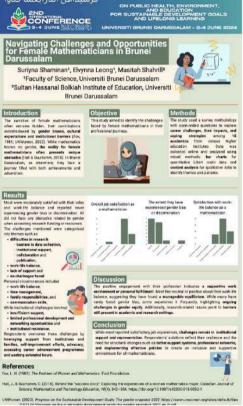


Nurses and Midwives Retreat Day

The Nursing and Midwifery programme of the Pengiran Anak Puteri Rashidah Sa'adatul Bolkiah Institute of Health Sciences (PAPRSBIHS), in collaboration with the Nursing and Midwifery Student Body of Universiti Brunei Darussalam, hosted the Nurses and Midwives Retreat Day in May 2025. The special event commemorated the International Day of the Midwife and International Nurses Day, aligning with the global themes "Midwives: Critical in Every Crisis" and "Our Nurses. Our Future. Caring for nurses strengthens economies." It aimed to honour the invaluable contributions of nurses and midwives



while fostering wellbeing, resilience, and solidarity among healthcare professionals. Free and open to all nursing and midwifery students and professionals, the retreat welcomed over 200 participants comprising student nurses and midwives, as well as professionals from various institutions and healthcare sectors. The programme consisted of sharing sessions, mindfulness workshops, as well as team-building exercises.





ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL



An undergraduate module under the Chemistry Programme at the Faculty of Science, UBD. This module identifies and explains the underlying chemical principles involved in environmental processes, and seeks to apply these principles in understanding various man-made and natural environmental problems such as global warming, air pollution, water pollution, volcanic eruption, landslides, and solid wastes and so on. Topics covered by this module include biogeochemical cycles, pollution, encompassing air and water pollution, pollution control of freshwater and seawater chemistry, environmental water monitoring, sampling methods, quality standards, wastewater and potable water treatment, pollution modelling as well as the effects of chemical pollutions and managing environmental quality.



Urban Water Management and Public Acceptance of Rainwater Harvesting Systems: Insights from Young and Educated Respondents in Muslim Communities

Researchers at UBD have published an article investigating public acceptance of Rainwater Harvesting (RWH) systems in Brunei Darussalam for non-potable uses and ablution purposes. As water scarcity and environmental sustainability become increasingly critical global concerns, there is a growing need to identify alternative water resources.



Using an extended Technology Acceptance Model (TAM) framework, this research evaluates key factors influencing public perceptions, including Perceived Ease of Use (PEU), Perceived Usefulness (PU), Attitude Towards Use (ATU), Intentions to Use (ITU), and external factors such as Perceived Cost (PC), Subjective Knowledge (SK), and Technical Requirements (TR). Survey data were analyzed through regression techniques to assess these relationships. The results validate the TAM framework for understanding acceptance of RWH systems and highlight strong positive relationships between PEU, PU, and ATU, with ATU emerging as the strongest predictor of behavioral intentions (ITU). External factors like PC and TR were identified as barriers to adoption, emphasizing the need for financial incentives and technical support. Additionally, subjective knowledge was found to positively influence PU and ITU, underscoring the importance of public awareness campaigns. While concerns about the safety and quality of recycled rainwater were present, they were not significant deterrents to acceptance. Read the paper here.



ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL



Coliform
Monitoring and
3D Printed
Prototype of
Filtration Tap for
Clean Water at
UBD Campus

As part of the UBD the Sustainability Living Lab, the UBD Sustainability Grant is supporting the following student-led



project to better promote sustainability on campus. This project focuses on monitoring water quality at UBD and addressing microbial contamination risks through a combination of testing and filtration innovation. It monitors and evaluates coliform bacteria across the university's water supply, including pipes, surface drains and drinking points, using portable test kits that allow for rapid detection at multiple campus locations. The data collected will be used to map contamination hotspots and assess the effectiveness of existing water treatment and distribution systems. In parallel, the project designs and develops a 3D-printed filtration tap prototype that offers a low-cost, modular and easy-to-maintain solution to improve water safety. Beyond the technical outputs, the initiative also raises awareness of water quality issues among students and staff, contributing to long-term improvements in sustainable water management practices on campus.

Principal Investigator (PI):

Assoc. Prof. Dr. Stefan Herwig Godeke, Faculty of Science (FOS)

Student Leader (Co-PI):

Nur Anis Sharfinaz binti Muhammad Habil Ridzuan, BSc Geosciences

Team Members:

Shaidatul Nabilah binti Rasid, MSc by Research (Geosciences)

Noor Rabiatul Muzzakirah binti Haji Abu Bakar Ahmad, BSc Geosciences

Nurizz Syuhaidah binti Haji Muhammad Izhar Rahmadi, BSc Geosciences, Alumni (2018-2024)

Learn more about the UBD Sustainability Living Lab here.



ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL



Electric Vehicle

The UBD electric vehicle was donated by Chen Dingguang, a UBD student pursuing Master in Business Administration (MBA) at UBD School Business and of Fconomics. This electric vehicle will significantly enhance sustainability initiatives by reducing the campus's carbon footprint and promoting the use of technology.



The introduction of the electric vehicle marks significant progress in UBD's commitment to sustainability and serves as an inspiring example of how individual contributions can drive collective progress.



A Techno-Economic Assessment of Steam Methane Reforming and Alkaline Water Electrolysis for Hydrogen Production

Researchers at UBD have published an article exploring hydrogen's potential as a sustainable energy source for Brunei, given the nation's reliance on fossil fuels and associated environmental concerns. Specifically, it evaluates two hydrogen production technologies; steam methane reforming (SMR) and alkaline water electrolysis (AWE), through a techno-economic framework that assesses life cycle cost (LCC), efficiency, scalability, and environmental impact. SMR, the most widely used technique, is costeffective but carbon-intensive, producing considerable carbon dioxide emissions unless combined with carbon capture to yield "blue hydrogen". On the other hand, AWE, particularly when powered by renewable energy, offers a cleaner alternative despite challenges in efficiency and cost. The assessment revealed that AWE has a significantly higher LCC than SMR, making AWE the more economically viable hydrogen production method in the long term. A sensitivity analysis was also conducted to determine the main cost factors affecting the LCC, providing insights into the long term viability of each technology from an operational and financial standpoint. AWE's economic viability is mostly driven by the high electricity and feedstock costs, while SMR relies heavily on feedstock costs. However, Environmental Impact Analysis (EIA) indicates that AWE produces significantly higher carbon dioxide emissions than SMR, which emits approximately 9100 metric tons of carbon dioxide annually. Nevertheless, findings suggest that AWE remains the more sustainable option due to its higher LCC costs and compatibility with renewable energy, especially in regions with access to low-cost renewable electricity. Read the paper here.



ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL





The Borneo Studies Network (BSN) Secretariat and iCUBE Secretariat under the Office Assistant Vice-Chancellor (Global Engagement) at Universiti Brunei Darussalam (UBD) hosted The Young Researchers Workshop from 5th to 6th June 2025 at the Inspiring Hall, UBD. Themed '2030 and Beyond: Energy Transition and Sustainability in Borneo', the two-day workshop aimed to enhance participants' understanding of the sustainable development and transition policies through interactive learning and realworld applications. The engaging workshop involved participants immersive experience that highlighted the opportunities and challenges of achieving the Sustainable Development Goals (SDGs).

Activities illustrated the balance between environment and economy, emphasising the interconnectedness of economic, social, and environmental sustainability. The workshop greatly enriched the young researchers, providing insights into the opportunities of energy transition.



Energy Policy and Management (EPM) is a field of specialization under the Institute of Policy Studies (IPS) at UBD. EPM cluster's overall vision is to "become a leading and multi-disciplinary unit of IPS advancing post-graduate energy and environmental policy and management education, research and capacity building". Its overall mission is to "develop and strengthen capacities of energy industry" executives, public sector officials and policy-makers in Brunei Darussalam, the Asia-Pacific region and other regions globally who will play essential roles in building sustainable societies. Course modules are designed to equip energy industry executives on policy and management tools that respond to global and local challenges facing the energy sector. As an interdisciplinary field of study, the cluster also aims to strengthen other schools at UBD such as the Faculty of Science, Faculty of Integrated Technologies, School of Business and Economics, and School of Education through offering of modules under energy policy and management discipline. The EPM cluster also maintains close cooperation with the diplomatic community, industries and international research organisations.



PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL



Demographic
Trends,
Employment and
Diversification in
Brunei
Darussalam: An
International
Perspective

As part of a study into Brunei Darussalam's Economic Transition in a Shifting Global Asia, this book chapter looks at the growing mismatch between the labour force and employment in Brunei Darussalam and the policies that could lead to a better fit. The discussion is conducted from an international perspective to better understand the problems common to countries abundant in natural resources and the specificities of Brunei. The chapter contains an analysis of the demographic trends which shows that the labour force will peak around 2030 and decline slowly afterwards, with unemployment becoming less severe in the long term. However, the total dependency rate will become more acute, which raises the issue of financing the social cost of an ageing population. Analysis also examines unemployment and underutilisation of the labour force to show that labour market segmentation is one of their root causes. Later parts of the chapter examine the second driver of unemployment: the lack of diversification of the economy, despite the long-standing efforts of the Brunei government. The chapter concludes with a discussion of the policies that could be adopted to contribute to better diversification of the economy that turns its small size into the basis for a new sustainable growth regime. Read the chapter here.



World Bank Talent Outreach Programme



The Ministry of Finance and Economy (MOFE), the Manpower Planning Office (MPO) under the Prime Minister's Office, and UBD, in collaboration with the World Bank Group, hosted the inaugural World Bank Talent Outreach Programme in June 2025. This landmark event marks the first-ever collaboration between the World Bank Group and Brunei Darussalam on delivering such a programme. This shows the nation's continued

commitment to equipping its youth and professionals with the tools opportunities needed to thrive in the global development sector. Themed 'Empowering SEAVG Talent for Global Development', the World Bank Talent Outreach Programme served as a strategic platform to introduce aspiring youth and early-career professionals to career pathways at the World Bank Group. The World Bank Talent Outreach Programme stands as a significant milestone in Brunei Darussalam's efforts to connect its talent with global networks and institutions, contributing to the country's objectives under Wawasan Brunei 2035.



PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL



UNICAREER: Career and Employability Centre

UNICAREER is a networking platform connecting members of the university with potential employment and industry resources on national and global levels. It aims to support the goals of each individual as well as the goals of employers, the university, the nation, and the global community.

The Centre strives to assist students and alumni members to move forward in their roles by providing resources and connections that progressive support directions. Services and programmes provided by the Centre include career resources, career talk and workshops. one-on-one support guidance to help with resume, interview preparation, or career direction, and Career Mentorship Programme. The Centre annually organises the UBD Career offering opportunities connect with future employers, alumni, and participating exhibitors.





The module "Public Sector Economics" discusses the important roles of government in an economy by ensuring not only the efficiency function but also the equity function of the economy. The module is designed to introduce students to the role of public sector in an economy and will attempt to expose students to reasons for government intervention and how the intervention can affect the behaviour of other economic agents. Topics covered by this module include understanding the role of government in the economy, theories of market efficiency and market failure, cost and benefit analysis used in private and public sectors, social security, education, as well as taxation and issues related to government budget. This module is taught under the Bachelor of Business (Economics) at the School of Business and Economics, UBD.



BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION



Manufacturing **Practices with** General **Engineering at UBD**

As part of the General Engineering Program at the Faculty of Integrated Technologies (FIT), Manufacturing Systems Engineering is a field that combines principles from engineering, management, and computer science to design, analyze, and optimize manufacturing systems. It involves the application of engineering principles and techniques to enhance the efficiency, productivity, and quality of manufacturing processes. Key areas of focus in the manufacturing systems concentration include Sustainable Manufacturing, which incorporates sustainable practices and lean manufacturing principles to minimize waste, reduce energy consumption, and improve overall environmental performance. This includes implementing strategies such as recycling, energy-efficient technologies, and lean production techniques.



Innovfest

The UBD Innovation Festival 2025 (Innovfest 2025) is a four-day innovation and entrepreneurship festival organised by the Office of the Assistant Vice Chancellor (Industry Engagement & Enterprise Development, IEED). InnovFest 2025 brings together students, researchers, industry experts, entrepreneurs, and the public in a shared celebration of bold collaboration, and entrepreneurial growth.



InnovFest 2025 is a rebranding of the previous Incubation Festival to reflect its broader mission of creating an inclusive platform for UBD community and industry stakeholders to showcase innovations, prototypes, and research with commercialisation potential. The Festival featured exhibition booths and project showcase, allowing UBD students undertaking programmes such as the Discovery Year U-Beyond Incubation, Venture Lab and Entrepreneurship for Digital Scientists to showcase their work to academic and industry audiences. InnovFest 2025 also includes dynamic programmes such as entrepreneurial workshops for visiting schools and colleges, business talk sessions with Brunei's prominent start-up figures, and Young Business Leaders Talks. This event serves as a platform for UBD's student entrepreneurs and innovators to present the results of their hard work in developing and prototyping business ideas.



BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION



Researchers at UBD have published a study on Electric Vehicles (EVs) adoption, introducing a versatile model that amalgamates stakeholders and policies and leveraging local data with broader market applicability. EVs emerge as a crucial solution for alleviating the environmental footprint of the transportation sector. However, fostering their widespread adoption demands effective, targeted policies. This study delineates two key EV adopter groups—innovators and imitators—shedding light on their evolving impact on adoption trends. A pivotal feature of the model is the factoring of EV attractiveness, comprising Life-Cycle Cost (LCC), Driving Range, Charging Time, and infrastructure availability, all of which are expected to improve with the fast technological advancement of EVs. Financial policies, notably subsidies, prove potent in boosting EV adoption but fall short of targeted sales due to imitator lag.

In response, a pragmatic solution is proposed: a government-led EV acquisition of 840 EVs, coupled with a 20% subsidy on new EV purchases and a 20% tax on new ICEV purchases, potentially realizing a 30% EV sales target by 2035. Future research avenues may delve into behavioral dynamics prompting imitators' adoption, optimizing EV infrastructure strategies, and assessing the socio-economic impacts of EVs. Interdisciplinary approaches hold promise for enriched insights for effective EV integration policies. Read the article <a href="https://example.com/html/per-example.co



Belia Tabah

The UBD Belia Tabah team achieved a significant milestone at the Shell Eco-marathon Asia-Pacific and the Middle East 2025, held at the Lusail International Circuit in Doha. Oatar. The team secured a 3rd place finish in the Prototype Battery-Electric category Mekar, achieving an energy efficiency of 301.7km/kWh. This broke their national record set last year in Indonesia where they placed 9th and achieved an energy 285.5km/KWh, efficiency of demonstrating their unwavering dedication, innovation, and technical expertise over five rigorous days of competition.



This is a momentous achievement, as the team encountered numerous challenges, including technical setbacks and high pressure demand for maximum efficiency. Despite these obstacles, the team's perseverance led to their well-earned position in the competition. Learn more about Belia Tabah here.



REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES



Diverse Learning Needs Services

The Counseling and Diverse Learning Needs Office at UBD is responsible for ensuring the welfare of students with diverse learning needs is taken care of. These include teaching and learning issues, allowances, accommodation, physically disabled, mentally disabled and medical needs. The Centre also coordinates the academic and non-academic service provisions for such students, such as establishing and clarifying records on the students, as well as advising and monitoring services to enhance the inclusion of students within the institution. The Centre may also refer students with diverse needs to other agencies or institutions as appropriate. Among the resources and facilities provided by the Centre include production of Braille and other embossed materials for students with visual impairment, e-mail services for students with diverse learning needs, support for students with special needs during lectures and examinations, as well as many other assistive technologies.



EDI-Brunei Project Workshop: "Embedding Equity, Diversity & Inclusion (EDI) in Higher Education in Brunei"

FASS academics Dr Sharifah Nurul Huda Alkaff and Khairunnisa Haji Ibrahim, together with their collaborator Dr Muhammad Qasim Rana from the University of the Built Environment in the UK, delivered a series of insightful presentations and facilitated the EDI-Brunei Project Workshop, themed "Embedding Equity, Diversity & Inclusion (EDI) in Higher Education in Brunei".



The half-day workshop, aimed at advancing inclusive education in Brunei by exploring strategies to embed EDI principles in higher education institutions (HEIs), was warmly received by university management, colleagues, and students alike. Participants engaged actively, reflecting a strong interest and commitment to fostering more equitable and inclusive practices within Brunei's higher education landscape.

The workshop not only provided practical strategies but also inspired dialogue on the importance of building academic environments that embrace diversity and empower all learners. The success of the event highlights the positive steps Brunei's academic community is taking towards creating inclusive and forward-looking educational spaces.



REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES



Inclusive Campus Design

UBD strives to ensure that all students and staff, regardless of abilities, have equal opportunities to learn, grow, and thrive. We are dedicated to fostering an inclusive and accessible environment, where every individual can fully participate in university life. To support this vision, we have implemented essential accessible facilities such as ramps. handrails, and lifts, ensuring that the campus is easily navigated by individuals with diverse mobility needs. Additionally, we are actively working on initiatives such as the installations of designated parking spaces around campus, which will further enhance accessibility for all. These efforts are a reflection of UBD's ongoing commitment to creating a welcoming, supportive, and equitable environment, where everyone can thrive and succeed, no matter their abilities.





"Speak in Silence" Workshop

UBD School of Business and Economics, in collaboration with Jari-Jariku Global, hosted the "Speak in Silence" Sign Language Workshop in April 2025, an awareness-driven initiative aimed at promoting inclusivity and empowering the public with basic sign language skills. The workshop was organised by Master of Management students, under the module "Project Management Principles and Practices."



The workshop was facilitated by Cikgu Dr Hjh Norbayah, a certified sign language educator and interpreter and supported by a team of nine facilitators from Jari-Jariku. A total of 25 members of the general public attended the session. The workshop aimed to raise awareness about the importance of sign language in communication, equip participants with foundational sign language skills, as well as foster empathy and understanding toward the deaf and mute communities in Brunei, and inspire ongoing learning and advocacy for inclusivity. The interactive workshop included hands-on lessons, receptive tests, and personal stories shared by members of the deaf and mute communities. Participants were also introduced to basic sign vocabulary and given opportunities to engage in role-play scenarios. Learn more about the initiative here.



MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE



The module "BSB as a Sustainable City" expose students to plans developed in the BSB Masterplan, and engage students in addressing potential issues and problems associated with their implementation. This includes participating in various aspects of the development process through course projects. The module provides students with the opportunity to contribute in some ways to the realization of the BSB Masterplan. Topics covered by this module include geographical & historical context, Brunei identity and heritage, planning concepts and priorities of the BSB Masterplan, population projection and associated issues, infrastructure and development issues, as well as new urban economy. This module is taught under the Geography, Environment and Development Programme at the Faculty of Arts and Social Sciences, UBD.



Leveraging sparse Gaussian processes for property price modelling and sustainable urban planning



Researchers at UBD have published a chapter, introducing Sparse Gaussian Processes (SGP) as an efficient solution to the computational limitations of traditional Gaussian Process Regression (GPR) in large datasets, crucial for modelling property prices. By incorporating a smaller set of $m \ll n$ inducing variables, SGPs reduce computational complexity from O(n 3) to O(nm 2) and minimize storage needs, making them practical for extensive real-world applications. This chapter applies SGPs to model property prices in Brunei, focusing on scenario analysis to evaluate different urban planning strategies' impacts on property values. This approach aids in informed decision-making for sustainable urban development, aligning with the United Nations Sustainable Development Goal 11 (SDG 11) to foster inclusive, safe, resilient, and sustainable cities. The findings underscore the potential of SGPs in spatial data analysis, providing a foundation for policy-makers to integrate economic and environmental considerations into urban planning. Read the chapter here.



MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE



The 'Urban Transformations in Southeast Asia' workshop, organised by Institute of Asian Studies (IAS) brought together 13 invited international speakers and seven speakers from Brunei, to present and discuss papers on this theme. The line-up included two keynote speakers: Professor Gavin Shatkin from Northeastern University, United States of America (USA) and Professor Tim Bunnell from National University of Singapore (NUS), Singapore. At the workshop, UBD Vice-Chancellor Dr Hazri Haji Kifle pointed out that urban issues remain key to the understanding of sustainability at the local, national, regional, and international levels. Dr Hazri also highlighted that the workshop



aligned well with Pillars 1 and 5 of the UBD Sustainability Master Plan. Since its establishment in 2012, the IAS has successfully organised a series of research workshops, which are part of the institute's flagship research activities. This workshop contributes to the development of cuttingedge and interdisciplinary urban scholarship at IAS and beyond.



3rd BSN Conference

UBD in its role as the Secretariat for the Borneo Studies Network (BSN), hosted the 3rd BSN Conference in June 2025 at UBD. This year's conference, themed 'Smart City Transformation, Biodiversity, and Green Supply Chain in Borneo', aligns closely with global efforts toward sustainable development and climate resilience. The conference brought together academics, university representatives, professionals, and civil servants from across the region, creating a



collaborative platform to explore transformative strategies and future opportunities for Borneo. The two-day event featured three keynote addresses and a series of parallel sessions covering a wide range of sub-themes, including: Circular Economy, Clean Materials and Energy, Biodiversity, Sustainable Urban Development and Blue Urbanism, Sustainable Transformation, and Climate Resilience.

Learn more about BSN <u>here</u>.



ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS



An undergraduate module under the Geography, Environment and Development Studies Programme at the Faculty of Arts and Social Sciences, UBD. This module aims to examine the issues concerning sustainable management of natural resources, and promotes a systems approach to resource management, viewing all the various elements, e.g. biological, social and economic, as an integrated system. The module also considers how societies can participate effectively within these cycles and thus create a sustainable relationship between the environment and human activities.



As part of the UBD the Sustainability Living Lab, the UBD Sustainability Grant is supporting the following staff-led initiative that enhance operations, teaching or engagement of sustainability on campus. This project establishes a campus-based waste-to-resource system through a series of integrated technical approaches. It begins with a comprehensive waste audit of UBD to identify and quantify organic waste streams, followed by the implementation of a structured segregation and collection system using clearly labelled bins for "green waste" (such as leaves, fruit scraps, and vegetable matter) and "brown waste" (cardboard and prunings).

Composting facilities will be developed using both bin/container and heap methods, with the process optimised by maintaining a carbon-to-nitrogen (C:N) ratio of approximately 30:1 and regular monitoring of key parameters including temperature, pH, moisture, and microbial activity. In parallel, controlled fermentation trials will be conducted to convert food waste into liquid organic fertilizers and hydroponic media, with close monitoring of dissolved oxygen, pH, and nutrient concentration to ensure product quality. The project will also integrate IoT sensors to track environmental conditions and improve the efficiency of

composting and fermentation processes.



Outputs from these systems will be rigorously tested through controlled plant trials, evaluating growth rates, biomass production, soil quality, and yield. Once validated, the processes will be scaled up for campus-wide implementation, with disseminated through student outcomes engagement, workshops, and wider community outreach initiatives.

Principal Investigator (PI): Dr. Faizah Metali, Faculty of Science (FOS); Co-Investigators: Dr. Nicole Lim Chai Hoon (Faculty of Science), Dr. Muhammad Saifullah Abu Bakar (Faculty of Integrated Technologies); External Collaborator: Dr. Mohamad Hilmi Ibrahim, Universiti Malaysia Sarawak (UNIMAS)

Learn more about the UBD Sustainability Living Lab here.





ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS





UBD Recycling Initiative aims to sustainability on campus by making recycling convenient and accessible for the university community. Recycling bins are strategically placed across campus for the collection of paper, plastic, and other recyclable materials, encouraging students, staff and faculty to dispose of waste responsibly. These efforts help reduce the amount of trash sent to landfills while promoting the reuse of valuable resources. In July 2022, UBD launched the Paper Recycling Project to further promote and facilitate paper recycling within the university. Building on these efforts, UBD introduced RAKSA, our green mascot and the face for the Recycling and Composting Awareness Campaign. RAKSA represents our shared commitment to sustainability and inspires the community to embrace responsible waste sorting, from recycling paper and plastics to composting food waste, helping us maintain a cleaner, greener campus. By combining our established recycling programmes with RAKSA's vibrant outreach, UBD continues to lead the way in reducing landfill waste, promoting resource recovery, and fostering a campus culture of environmental responsibility.



Sustainability Youth **Ambassador** Programme (SYAP) UBD, in collaboration with bpmFASS, hosted FASS SYAP-PING from 8-11 September 2025 at the CLT Foyer. The four-day event featured local food vendors and eco-friendly initiatives, giving the UBD community a chance to adopt sustainable practices. Visitors who donated items also received limited food vouchers, with all donations going to Lavida Sdn Bhd, a local second-hand thrift shop. Open to students and staff, the event turned sustainability into action, fun. community engagement.





TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS



The module "Climate Change Biology" aims to study how natural ecological systems are likely to be impacted by climate change. The module explores climate change from the perspective of habitat, the behavioural and physiological responses of organisms to change in habitat conditions, and community level responses. The module focuses on environmental temperature (warming) while also consider acidification of marine ecosystems. Topics covered by this module include historical and global climatic variation, habitat, operative, and organismal temperature, heat budget models, behavioural and physiological attributes for buffering thermal change, factors influencing climate warming vulnerability, thermal performance curves, thermal limits and energetics, as well as conducting experiments to determine the thermal limits of small ectothermic animals. This module is taught under the Biology Programme at the Faculty of Science, UBD.



Meteorological variability and predictive forecasting of atmospheric particulate pollution

Researchers at UBD have published a study showing that atmospheric PM₁₀ concentrations in Brunei-Muara district are influenced by meteorological conditions and they contribute to the warming of the Earth's atmosphere. Due to increasingly documented health effects associated with airborne particulate matter (PM), challenges in forecasting and concern about their impact on climate change, extensive research has been conducted to improve understanding of their variability and accurately forecasting them. PM₁₀ predictive forecasting models based on time and meteorological parameters are successfully developed, validated and tested for prediction by multiple linear regression (MLR), random forest (RF), extreme gradient boosting (XGBoost) and artificial neural network (ANN).



Incorporation of the previous day's PM₁₀ concentration (PM_{10,t-1}) into the models significantly improves the models' predictive power by 57–92%. The MLR model with PM_{10,t-1} variable shows the greatest capability in capturing the seasonal variability of daily PM₁₀ (RMSE=1.549 μ g/m₃; R₂=0.984). The next day's PM₁₀ can be forecasted more accurately by the RF model with PM_{10,t-1} variable (RMSE=5.094 μ g/m₃; R₂=0.822) while the next 2 and 3 days' PM₁₀ can be forecasted more accurately by ANN models with PM_{10,t-1} variable (RMSE=5.107 μ g/m₃; R₂=0.603 and RMSE=6.657 μ g/m₃; R₂=0.504, respectively). Read the paper here.



TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS



National Workshop on the ASEAN Climate Change Strategic Action Plan (ACCSAP) 2025–2030

Brunei Darussalam held its National Workshop on the ASEAN Climate Change Strategic Action Plan (ACCSAP) 2025–2030, hosted by UBD in June 2025. The event brought together representatives from government, the private sector, academia, NGOs and civil society to help shape Brunei's national input into ASEAN's next five-year regional climate framework. As appointed National Think Tank, UBD is coordinating a two-phase stakeholder engagement process, consisting of data collection and national



workshop. This ensures broad, evidence-based input informs Brunei's official contribution and priorities. Findings will be compiled into a National Report for submission to the ACCSAP Secretariat, led by the Institute for Global Environmental Strategies (IGES), in collaboration with the ASEAN Secretariat (ASEC) and the ASEAN Working Group on Climate Change (AWGCC). The workshop reaffirms Brunei's role in advancing ASEAN climate leadership and ensuring that national perspectives drive a sustainable and inclusive regional response.



Green Minds: Biodiversity and Climate Youth Awareness Programme



The 'Green Minds: Biodiversity and Climate Youth Awareness Programme' is a new collaborative initiative by the UBD Botanical Research Centre (UBD BRC) and the Brunei Climate Change Office (BCCO), designed as a hands-on learning experience where young people can explore nature and learn about climate change right in the heart of the UBD campus. The programme was officially piloted in August 2025 and brought together 31 students from Pusat Tingkatan Enam Meragang. With an overarching goal of educating and inspiring Brunei's younger generation to become environmental stewards, this youth-focused educational

programme aims to help young people better understand the twin crises of climate change and biodiversity loss, two of the most significant challenges the world is facing. Focusing on the impacts of these issues on Brunei, the programme highlights the country's unique plants and animals and the importance of nature. The programme also shows how caring for nature and fighting climate change are closely connected, and how these efforts support Brunei's goals for a better, more sustainable future.





CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT



Strengthening Maritime Research Through MoU with MPABD

The Maritime and Port Authority of Brunei Darussalam (MPABD) and UBD have officially signed a Memorandum of Understanding (MoU) on cooperation in the maritime field focusing on the Ballast Water Management Convention. The MoU outlines a framework for cooperation with the objective of fostering collaboration in maritime research, education, and operations. This collaboration will establish robust Ballast Water Management Convention testing capabilities at UBD's laboratory, a crucial step in ensuring Brunei's adherence to the international convention.

It also lays the groundwork for advancing applied research and monitoring within Brunei water. Furthermore, the collaboration creates opportunities for hands-on placements and postgraduate projects, directly benefiting students by providing practical experience and research avenues. The MoU represents a key step towards implementing international maritime conventions and promotion of sustainable maritime development in Brunei Darussalam.





Brunei Darussalam Forest to Reef Conference

The Brunei Darussalam Forest to Reef Conference held in June 2025 marked the formalisation of collaborations between UBD and its partners to support ongoing environmental conservation efforts. The event was jointly organised by the Department of Fisheries and the Forestry Department under the Ministry of Primary Resources and Tourism (MPRT), in collaboration with UBD and Poni Group, as part of the Brunei MidYear Conference and Exhibition (MYCE) 2025 and UBD's 40th anniversary celebrations.



The conference brought together key stakeholders in terrestrial and marine conservation to share best practices, strengthen inter-agency coordination, and promote regional ecosystem protection. A key highlight of the ceremony was the signing of Memorandum of Understanding (MoUs). The MoU between Poni Divers and UBD designated UBD as the Education Partner for Ocean Week Brunei 2025. Through this MoU, UBD will support relevant events such as the Ocean Sustainability Conference and the Future Ocean Changemakers Youth Forum.



CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT



UBD-AUN Summer Camp Participants Beach Cleanup Activity



UBD in collaboration with Green Brunei organised a Beach Cleanup activity as part of the UBD-AUN Summer Camp 2024. The event took place at Serasa Beach and saw enthusiastic participation from over 150 students from universities the across **ASEAN** University Network (AUN) Member Universities as Well ลร UBD students.

The Beach Cleanup activity was aligned with the summer camp's theme, "Green Horizons: Harnessing Digital Transformation for Biodiversity and Sustainable Development," and aimed to instill a sense of environmental responsibility among the participants. The cleanup effort focused on removing litters and marine debris to protect local wildlife and preserve the natural beauty of the coastline. The Beach Cleanup was one of the many activities within the 14-day UBD-AUN Summer Camp. The camp aims to empower students with global competency skills and promote interregional cross-border exchange. Throughout the programme, students also attended lectures on topics such as Al and Remote Sensing for Biodiversity Monitoring and Preservation, and excursion activities such as tree planting ceremony. Participants collected more than 200 kg of waste, including plastic bottles, cans, and other debris, which was then sorted for recycling and proper disposal. The success of the Beach Cleanup activity underscores UBD and Green Brunei's commitment to fostering sustainable development and environmental stewardship among the youth.



The module "Marine Ecosystems" aims to obtain an understanding of biological, chemical, and physical processes in marine ecosystems and to obtain the skills and knowledge to perform field and laboratory works to survey marine environments. Topics covered by this module include the study of estuaries, intertidal communities, coral reefs, continental shelves, open ocean, commercial fishing, pollution, climate change, and coastal development as well as teaching laboratory and field work skills to study marine sciences. This module is taught under the Biology Programme at the Faculty of Science, UBD.



PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS



The module "Organisms and Environment" is designed to provide a foundation in ecological principles, ecosystem functioning and a broad overview of natural environments on Earth. This module will also study the development of an understanding of biotic and abiotic factors and interactions that influence the distribution of plants and animals geographically and temporally, as well as current issues relating to human impact on the global environment. Topics covered by this module include the biogeography of Asia, island biogeography and conservation, climate and plant distribution, soils and plant distribution, models of population growth, marine ecology, community ecology, as well as global trends and predictions in examining the global biodiversity crisis. This module is taught under the Biology Programme at the Faculty of Science, UBD.



As part of the UBD the Sustainability Living Lab, the UBD Sustainability Grant is supporting the following staff-led initiative that enhance operations, teaching or engagement of sustainability on campus. The UBD Living Forest Project seeks to transform the UBD campus into a unique living forest by restoring degraded and Acacia-invaded areas through a science-based reforestation programme. The project will plant at least 500 native tree saplings of high ecological value across the campus and establish six permanent monitoring plots to enable long-term tracking of sapling survival, growth, and biodiversity recovery. It will also develop a standardised campus tree planting protocol aligned with the UBD Campus Greening Plan, ensuring consistency and sustainability in future restoration efforts. In addition, the project will actively engage at least 200 students, staff, and volunteers in tree planting, care, and monitoring activities.



By combining habitat restoration with citizen science and long-term monitoring, the initiative ensures both ecological recovery and community ownership, positioning UBD as a leading model of nature-based sustainability solutions.

Principal Investigator: AP Dr. Rahayu Sukmaria Hj Sukri, Institute for Biodiversity and Environmental Research (IBER) Co-Pl: Dr. Salwana Md Jaafar (IBER)

Learn more about the UBD Sustainability Living Lab <u>here</u>.



PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS



Geochemical baselines of potentially toxic elements in Brunei-Muara soils, Brunei Darussalam: Towards environmental assessment and risk management

Researchers at UBD have produced a comprehensive study on the presence of potentially toxic elements (PTEs) in the topsoil and subsoil of Brunei-Muara District in Brunei Darussalam. Descriptive statistics were employed to analyze the data, and the threshold values for PTEs in both soil layers were determined. Adopting the Tukey's inner fence method, the paper recommends baselines for PTEs. The study delved into the distribution patterns and potential sources of PTEs in Brunei-Muara, and identified traffic and agricultural activities as significant contributors to the presence of As, Cr, Cu, and Pb. The study employed Principal Component Analysis on the log₁₀-transformed data to examine the behavior and mechanisms governing the mobility and retention of PTEs in the soil. This helps better characterize the element distribution within the baseline and the recognition of three additional processes enriching the topsoil and subsoil in PTEs. Read the paper here.



Badas Tree Planting Project: Phase 2 The Institute for Biodiversity and Environmental Research (IBER) at UBD has officially launched Phase 2 of the Badas Tree Planting Project, in collaboration with Brunei Shell Petroleum Company Sdn Bhd (BSP) and the Brunei Forestry Department. Supported by BSP as part of its Social Investment programme, the Badas Tree Planting Phase 2 contributes to Brunei's National Climate Change Policy Strategy 2 on forest cover enhancement and was held in conjunction with UBD's "Rooting for the Future" initiative celebrating the university's 40th Anniversary. The Badas Tree Planting Phase 2 continues IBER's long-term, science-based efforts to rehabilitate degraded ecosystems in Brunei



Darussalam through research, education and community participation. Project lead Associate Professor Dr Rahayu Sukri from IBER shared that the first phase of the Badas Tree Planting Project, launched in 2021, saw over 300 Rubroshorea albida saplings planted on site through a citizen science approach that combines scientific research on tropical peatland restoration with active volunteer engagement. Locally known as Alan, Rubroshora albida is conservation value peat swamp species whose natural distributions are now largely restricted to Brunei's peat swamp forests.





PROMOTE PEACEFUL AND INCLUSIVE SOCIETIES FOR SUSTAINABLE DEVELOPMENT, PROVIDE ACCESS TO JUSTICE FOR ALL AND BUILD EFFECTIVE, ACCOUNTABLE AND INCLUSIVE INSTITUTIONS AT ALL LEVELS



4th Royal Brunei
Police Force
Executive
Development
Programme for
Middle
Management
Officers

The Institute for Leadership, Innovation, and Advancement (ILIA), UBD in collaboration with the Royal Brunei Police Force (RBPF), launched the Executive Development Programme for Middle Management Officers (EDPMMO) in August 2024. The nine-week executive training programme was designed to equip 20 middle management officers with essential skills and fresh perspectives on national, global, and regional socio-political landscapes. The programme aligns with Brunei's national vision, Wawasan Brunei 2035, which aims to provide a high quality of life, education, and a sustainable economy for its citizens. Additionally, the curriculum incorporated into the programme addresses various aspects of sustainable development, reflecting Brunei's commitment to the United Nations Sustainable Development Goals (SDGs). Key modules cover a range of topics, including Brunei's economy, which offers participants insights into the nation's economic structure, challenges, and growth opportunities. In particular, the module on Best Practices in Police Integrity Management directly supports SDG 16: Peace, Justice, and Strong Institutions, ensuring high standards of integrity within law enforcement.



The Brunei Forum

The Brunei Forum was organized by the UBD Academy of Brunei Studies (APB) in February 2024. Themed "Brunei Today and Over the Next Thirty Years," the two-day forum provided an enriching platform for profound discussions on the contemporary landscape of Brunei and its envisioned future, focusing specifically on Wawasan Brunei 2035. The forum featured keynote speeches, special talks, as well as engagement sessions with youth leaders and representatives from Non-Government Organisations (NGOs).



The forum hosted 15 parallel sessions, allowing scholars to present their findings and perspectives on various themes, including Cultural and Environmental Development and Sustainability, Economic Development and Entrepreneurship, International Relations, Youth and Capacity Building, and Health and Ageing. The Brunei Forum 2024 was significant platform for fostering collaboration and shaping Brunei's future trajectory. The insights gained and discussions held during the forum will undoubtedly contribute to the realisation of Wawasan Brunei 2035.





PROMOTE PEACEFUL AND INCLUSIVE SOCIETIES FOR SUSTAINABLE DEVELOPMENT, PROVIDE ACCESS TO JUSTICE FOR ALL AND BUILD EFFECTIVE, **ACCOUNTABLE AND INCLUSIVE INSTITUTIONS AT ALL LEVELS**



ICFIS 2025: Islamic Principles Explore Solutions to Global Challenges



UBD officiated the inaugural International Conference on Islamic Finance and Sustainability (ICIFS) 2025 in February 2025. Under the theme "The Role of Islamic Finance Achievina Sustainable Development Goals," ICIFS 2025 is dedicated to exploring the vital role that Islamic financial principles play in global sustainability efforts. The conference agenda serves as a key platform for in-depth discussions on the integration of cutting-edge

technologies, such as blockchain and artificial intelligence, with Islamic financial services to enhance transparency and inclusivity. Additional sessions also explored innovative Islamic financial instruments, including sukuk for renewable energy financing and the role of Islamic microfinance in empowering economically disadvantaged communities. Another key highlight of the conference was the exchange of several MOUs with key stakeholders, symbolising a shared commitment to advancing sustainability and innovation in Islamic finance. These agreements serve as a catalyst for significant collaborative efforts between UBD, the UBD School of Business and Economics, and its partners. Formal partnerships were established with the Brunei Darussalam Central Bank (BDCB), UN Global Compact Malaysia and Brunei, and Ozean. ICIFS 2025 is a pivotal forum for distinguished academics, industry professionals, and policymakers, facilitating a collaborative environment to forge innovative solutions and forward-thinking strategies for a sustainable financial future.



Student The Persatuan Mahasiswa/i Universiti Brunei Darussalam (PMUBD), or UBD Student Union, is the official student association at Universiti

Brunei Darussalam, established in 1986. Led by the Students' Representative Council, PMUBD serves as the primary platform for student representation, advocacy, and engagement within the university. Key roles and functions of PMUBD include providing essential governance input to the university, establishing channels for voting of student representatives, supporting students throughout their academic journey, as well as organizing a wide range of social, cultural, and recreational activities to foster a vibrant campus life. Learn more about PMUBD here.





STRENGTHEN THE MEANS OF IMPLEMENTATION AND REVITALIZE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT



UK Partner Dental Schools Visit (The University of Glasgow and The University of Dundee)

In October 2024, representatives from the University of Glasgow and the University of Dundee met with UBD dental staff to discuss key developments in dental education and partnerships. The meeting focused on several important topics related to the future of dental education and training, such as successes and future opportunities of student progression through partnerships between the two

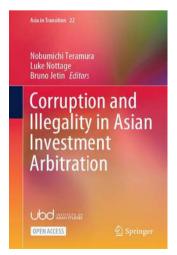
prestigious institutions, as well introduction of the new Safe Practitioner Framework by the General Dental Council (GDC). This framework includes significant changes to dental education and the impact on student curricula and emphasizes enhanced safety and competence practitioners. The meeting also provided a platform to explore other areas collaboration, including staff development and opportunities for further strengthening the partnership between both institutions.





Corruption and Illegality in Asian Investment Arbitration

Edited by researchers from the Institute of Asian Studies, Universiti Brunei Darussalam, and the Law School, University of Sydney, this open access book explores Asian approaches towards investment arbitration—a transnational procedure to resolve disputes between a foreign investor and a host state setting it in the wider political economy and within domestic law contexts. It considers the extent to which significant states in Asia are, or could become, "rule makers" rather than "rule takers" regarding corruption and serious illegality in investor-state arbitration. Corruption and illegality in international investment are widely condemned in any society, but there remains a lack of consensus on the consequences, especially in investment arbitration. A core issue addressed is whether a foreign investor violating a host state's law should be awarded protection of its investment, as per its contract with the host state and/or the applicable investment or trade agreement between the home state and the host state. The book starts with a deep dive into economic and legal issues in corruption and investment arbitration and then explores the situation and issues in major countries in the region in detail. Read the book here.





STRENGTHEN THE MEANS OF IMPLEMENTATION AND REVITALIZE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT



The Brunei Borneo Sustainability Summit

The Brunei Borneo Sustainability Summit, hosted by Universiti Brunei Darussalam (UBD), brought together sustainability experts from Indonesia, Malaysia, and Brunei Darussalam from 21st to 22nd April 2025. The summit provided a vital platform for collaboration, knowledge sharing, and strategic planning to address key environmental and socio-economic issues facing the Borneo region, with the aim of drafting the Borneo Assessment Report. The summit's two days were filled with productive workshops,

discussions, and presentations across various clusters, including topics such as geography, flora, fauna, sustainable agriculture, and economic development. aimed These sessions to identify regional sustainability challenges and develop actionable strategies for addressing them, while fostering stronger networks and partnerships across the region. The summit also successfully produced a first draft outline of the Borneo Assessment Report, identifying key priorities for each cluster and reinforcing collaborative efforts to ensure sustainable development across Borneo.





UBD AUN/SEED-Net International Conference

Continuing its dedication to sustainable development and cutting-edge research, UBD in collaboration with the ASEAN University Network Southeast Asia Engineering Education Development Network (AUN/SEED-Net), hosted the International Conference on Engineering and Advanced Materials (ICEAM) 2025 in January 2025. Held in Bandar Seri Begawan, Brunei Darussalam, the conference adopted a hybrid format, enabling both in-person and virtual participation to foster greater global engagement. Under the theme Sustainable Engineering and Materials, the conference brought together over 100 researchers,

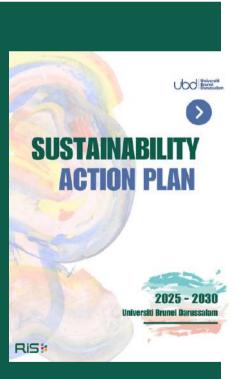


scientists, and industry professionals from Brunei and across the globe, to discuss innovations in energy systems, artificial intelligence in engineering, circular economy practices, and renewable energy. ICEAM served as a platform for knowledge exchange, fostering collaboration between academic researchers, industry experts, and practitioners. Discussions also centered on the latest developments in clean energy, artificial intelligence applications, and material innovations, further solidifying UBD's role in driving sustainable engineering solutions.

TURNING VISION INTO ACTION

The UBD Sustainability Action Plan builds on the foundation of the UBD Sustainability Master Plan, moving from strategy to implementation. Centered around the five UBD Sustainability Pillars, it sets clear goals, measurable targets, and key actions that will guide UBD's progress towards 2030. Evolving with new ideas and global developments, this living framework reflects UBD's commitment to continuous improvement, turning ambition into impact and inspiring collective action for a more resilient and sustainable future.

Read the UBD Sustainability Action Plan here.





Goal 1

To catalyse innovative, interdisciplinary research that delivers tangible sustainability solutions



Goal 2

To cultivate a generation of sustainability-minded graduates equipped with the knowledge and skills to lead transformative change towards a greener, more just and resilient future



Goal 3

To transform UBD into a sustainable and vibrant campus that supports green living, low-impact operations and the well-being of its community



Goal 4

To embed sustainability into the DNA of university policies, systems and leadership



Goal 5

To empower communities within and beyond the university through inclusive engagement, partnerships and capacity-building initiatives that promote sustainable living and catalyse societal transformation

Phase 1 2024

Phase 2 2024-2026

Phase 3 2026-2030

January - February 2024

Preparation of a general text on UBD sustainability goal (supporting for THE)



March - June 2024

Stakeholder Engagements



June - July 2024

Development of UBD Sustainability Masterplan

September - October 2024

UBD Sustainability Action Plan



November 2024

Workshop



September 2024 - August 2026

Baselines Data Collection

September 2026 - August 2030

UBD Sustainability Report

Annual publication on ESG reporting based on the 5 pillars:

- Driving Innovation through Sustainability Research
- Cultivating Sustainability
 Champions through
 Transformative Education
- Futuring Sustainability through Green Campus
- Sustainable Stewardship through Visionary Governance
- Empowering Sustainable and Resilient Communities through Engagement and Partnership

September 2026

- Target setting for SDGs initiatives
- Implementation timeframe
- Budget proposal
- Improvement based on feedback and requirement

Our Sustainability Timeline

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Chair, Assistant Vice Chancellor Research, Innovation and Sustainability

Dr Wardah Hakimah Sumardi

Deputy Chair, Director of Sustainability, OAVCRIS

Professor Dr Basilios Tsikouras

Head of Research Cluster, Director of Research, OAVCRIS

Dr Fairuzeta Hj Md Ja'afar

Head of Education Cluster, Director of Studies, OAVCE

Awg Aminor Syaidini bin Hj Abdullah

Head of Infrastructure Cluster, Head of CAMPUs, OAVCULG

Hjh Maudena binti Hj Abd Hamid

Head of Operation and Governance Cluster, Assistant Vice Chancellor University Life and Governance, OAVCULG

Dr Siti Mazidah binti Haji Mohamad

Head of Community Engagement Cluster, Director, Centre of Advanced Research (CARe)

MEMBERS

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Director of Centre of Advanced Material and Energy Sciences (CAMES)

Mr Lim Sei Guan

Director of Office of Strategy, Delivery and Institutional Advancement (SeDIA)

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SUSTAINABILITY STARTS HERE











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