



## Climate Action

Take urgent action to combat climate change and its impacts.



### Universiti Malaya's Commitment to Climate Action

Universiti Malaya (UM) stands at the forefront of addressing climate change, driven by its deep commitment to education, research, and community engagement. Aligned with Sustainable Development Goal 13 (SDG 13), UM recognises the critical need for robust action against climate change and its impacts.

Guided by strategic frameworks such as the UM Transformation Plan 2021-2030 and the UM Master Plan 2050, the university is dedicated to sustainability and climate resilience. This report highlights UM's efforts in reducing its carbon footprint, advancing climate education, and conducting pivotal climate-related research, placing these initiatives within the broader global context of achieving carbon neutrality by 2030 and net zero emissions by 2050.

## Monitoring Low Carbon Energy Consumption at the University

To support our commitment to sustainability, the university is focused on measuring the amount of low-carbon energy used across its campus. This involves assessing and quantifying the total energy derived from renewable or low-carbon sources, such as solar, wind, biomass, and renewable electricity from the Green Electricity Tariff (GET), and determining how it contributes to the university's overall energy consumption.

By evaluating this data, we aim to track our progress in reducing carbon emissions and enhance our efforts in utilising sustainable energy sources. This measurement will provide valuable insights into our energy use patterns and help us identify opportunities to further increase our reliance on low-carbon energy, aligning with our environmental sustainability goals.

## UM's Subscription to Green Electricity Tariff (GET) Offsets Nearly 49,000 Tonnes of CO2 Emissions in 2023

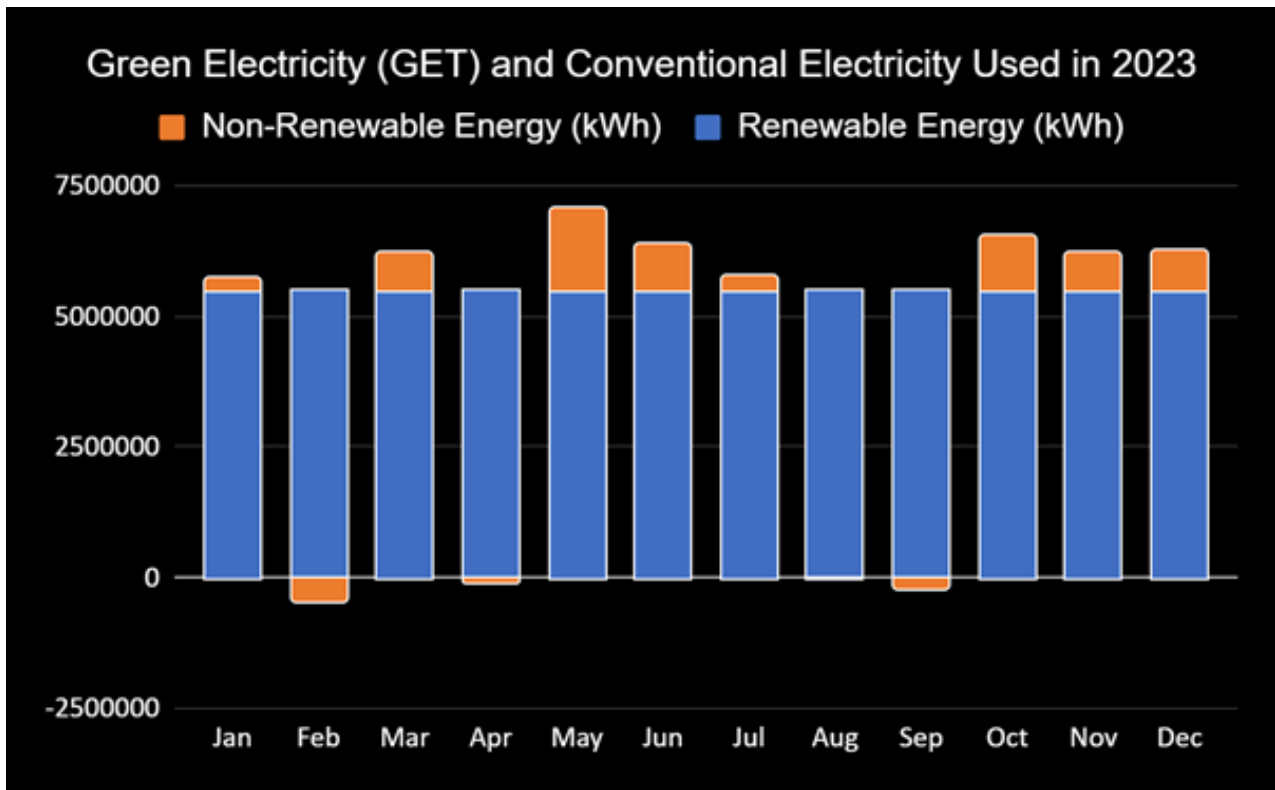
From 1 January 2023, to 31 December 2023, Universiti Malaya (UM) subscribed to a total of 66,000,000 kWh of Green Electricity Tariff (GET) provided by Tenaga Nasional Berhad (TNB). This tariff represents electricity generated from renewable sources, including solar and hydroelectric power, specifically from Stesen Janaelektrik Kenyir, Stesen Janaelektrik Sungai Perak, and various local solar photovoltaic power plants.

By opting for GET, UM has ensured that its electricity consumption is derived from sources with minimal environmental impact. The emissions associated with this green electricity are considered negligible, effectively reducing the university's carbon footprint.



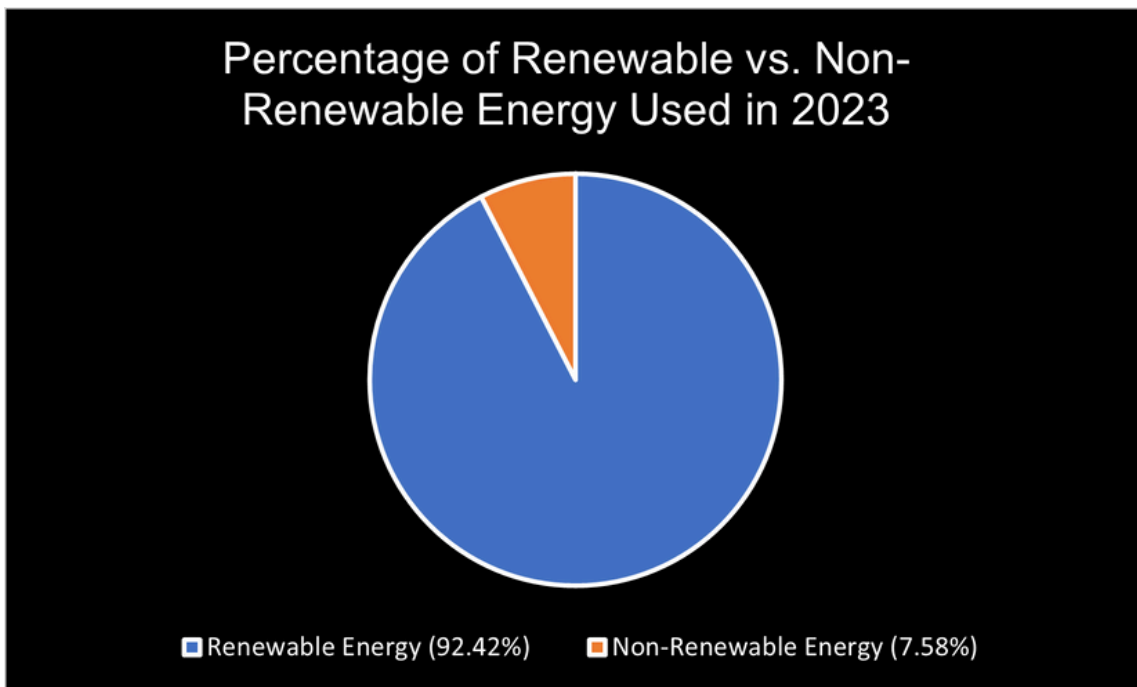
**Above (left and right):** The Green Electricity Tariff (GET) subscription by UM, acknowledged by Tenaga Nasional Berhad (TNB) (Source: UM Estates Department)

92% of Energy Used at UM in 2023 Comes from Renewable Sources



**Above:** This graph compares green electricity, sourced from solar and hydroelectric power provided by Tenaga Nasional Berhad (excluding UM’s own solar and wind power), with conventional electricity used by Universiti Malaya in 2023 (Source: UM Estates Department, analysed by UMSDC).

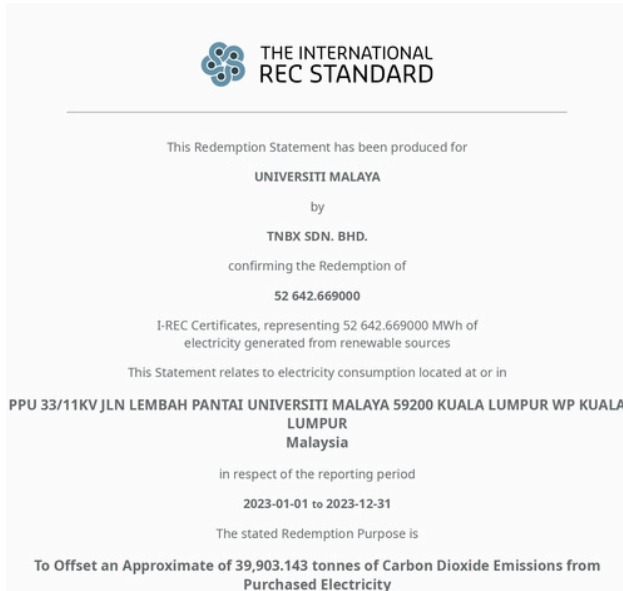
**Below:** In comparison to the bar graph above, the pie chart illustrates the distribution of energy sources used by UM in 2023: 92.42% renewable energy (from TNB) and 7.58% non-renewable energy (Source: UM Estates Department, analysed by UMSDC).





Additionally, UM has received certification from the International Renewable Energy Certificate (I-REC) in recognition of this commitment. Through this subscription, UM has successfully offset approximately 48,999.143 tonnes of carbon dioxide emissions related to its electricity use.

This substantial reduction in greenhouse gas emissions underscores UM's dedication to sustainability and its role in mitigating climate change.



**Above:** The International Renewable Energy Certificate (I-REC) affirms that UM's energy consumption is supported by a verified amount of renewable energy, underscoring the institution's dedication to reducing its carbon footprint and promoting environmental stewardship (Source: UM Estates Department)





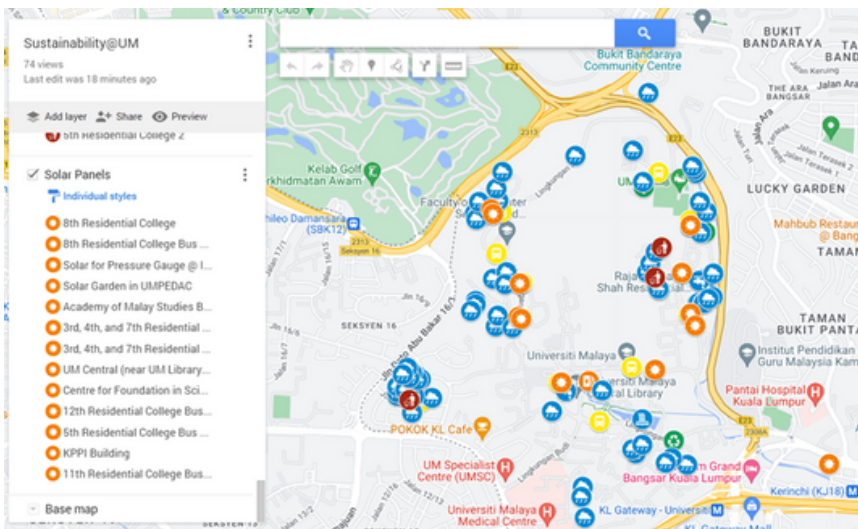
## Harnessing Clean Energy: Solar, Wind, and Biomass at UM Campus

Solar energy is harnessed at various locations across the campus, primarily from building rooftops and bus stations. This energy powers a range of applications, including fountains, bus station lights, garden lighting, gazebo lighting, safety warning lights, and parking lot illumination. Wind power is utilised for street lighting on the main campus through EcoGreenery Wind-Solar Outdoor Lighting systems, and it also supplies electricity to UM’s field studies center in a remote area. Additionally, a small amount of clean biomass energy is generated by collecting food waste from campus cafeterias and processing it with the UM Zero Waste Centre’s Cowtec Anaerobic Digester Machine.

In 2023, the use of solar power on campus expanded, with installations at locations such as the Department of Physics and the 11th Residential College. Additionally, new solar panels were installed by UM Estates Department to supply renewable energy for water pressure gauges at 50 different sites, further enhancing UM’s commitment to sustainable energy solutions.

**Table:** Types of onsite renewable energy in UM and the amount generated  
(Source: UM Estates Department)

Types of Renewable Energy in UM	Amount generated (kWh)
Solar Power	41,050.55 kWh
Wind Power	534.48 kWh
Biomass	4.15 kWh



**Left:** The complete map of solar, wind, and biomass energy locations at UM, along with the amount generated (kWh), can be viewed by following this link: [View Map](#) (Source: UMSDC)

## Enhancing Climate Change Awareness and Preparedness: UM's Educational and Public Engagement Initiatives

To address the multifaceted challenges of climate change, the university is committed to providing comprehensive local education programs and campaigns. These initiatives aim to enhance community awareness and understanding of various climate change aspects, including risks, impacts, mitigation strategies, adaptation methods, and impact reduction techniques. The programs focus on educating the public about the potential threats and vulnerabilities posed by climate change, as well as the adverse effects on the environment, health, and society.

Additionally, they provide practical guidance on reducing greenhouse gas emissions and adapting to the changing climate. Through early warning systems and the promotion of proactive measures, these educational efforts aim to empower individuals and communities to effectively address climate-related challenges and opportunities. UM has also made significant strides in integrating climate education across its curriculum, ensuring that all students, regardless of discipline, are exposed to the issues and opportunities presented by climate change.

### Superhero Iklim: Gamifying Climate Education for Impactful Change

The Superhero Iklim initiative introduced an innovative approach to climate change education by leveraging gamification to engage both Universiti Malaya and the local community. Over a six-week period, approximately 34 teams, each consisting of five members, participated in this immersive program designed to make climate education interactive and impactful. The initiative commenced with a comprehensive training phase, featuring two online and two in-person sessions that covered key topics such as energy conservation, waste management, and effective climate communication. These sessions aimed to equip participants with the knowledge and skills necessary to tackle climate challenges effectively. Following the training, participants embarked on a series of six climate change mitigation challenges. These challenges were enhanced with gamified elements such as avatars, rewards, leaderboards, levels, and badges, all designed to increase engagement, motivation, and learning.

By integrating these game features, the initiative sought to make the learning process more engaging and to foster a deeper understanding of climate issues. During the six weeks, the initiative generated significant online activity, with over 1,000 social media posts made public. Additionally, participants completed 917 tasks and missions related to climate change risks, mitigation strategies, effects, and impact reduction. This high level of engagement not only raised awareness but also demonstrated the effectiveness of gamification in climate education. At the end of the program, five standout teams were celebrated and recognised for their exceptional performance and contributions throughout the challenge. The Superhero Iklim initiative successfully combined education with entertainment, creating a memorable and impactful experience that inspired participants to take meaningful action against climate change.





**Above:** Participants of the Superhero Iklim challenge successfully located and identified solar-powered devices installed across Universiti Malaya

**Below:** During the closing ceremony of the Superhero Iklim program, participants were celebrated with a prize-giving event and a sharing session





## Navigating Climate Change: Expert-Led Webinars and Mass Media Engagement

Several webinars were conducted to enhance awareness and preparedness for climate change. These sessions covered a range of topics from expert speakers, including the relationship between climate change and health, energy infrastructure, the banking system, coastal vegetated ecosystems, science communication, and more. The webinars aimed to equip attendees with the information needed to make informed decisions and take proactive steps in their personal and professional lives.

- Breakfast@UMHealth Webinar: An online Continuing Medical Education (CME) program hosted by Universiti Malaya, featuring insights from clinical academic staff, medical specialists, researchers, and leading clinicians. Titled “**The Imperative of Climate Action to Promote and Protect Health in Asia**”, the webinar addressed the impacts of climate change in Asia and Oceania, examining current measures and proposing strategies for mitigation and adaptation. Key discussion points included how climate change exacerbates vector-borne diseases, malnutrition, air pollution, and mental health issues, while increasing risks from heatwaves, extreme weather events, and rising sea levels. Mitigation strategies focus on reducing greenhouse gas emissions through changes in transportation, energy consumption, and agricultural practices, while adaptation involves enhancing healthcare systems, developing early warning systems, and boosting public awareness, supported by technological innovations and community-based approaches.
- Master of Public Health Students’ Webinar: This session included presentations of videos such as “**The Earth Report – An Inconvenient Truth: Climate Change**” and a discussion on “**Climate Change Impacts on Indoor Air Quality**”. The aim was to provide valuable information that could benefit future audiences.
- UM Research Cluster Webinar: Titled “**Climate Change & Power Outages**”, this webinar explored the critical intersection of climate change and energy infrastructure. It examined how increasingly severe weather events and changing climate patterns impact energy systems, including power generation, transmission, and distribution, and to stimulate discussion on effective solutions for mitigating these impacts and ensuring reliable energy access in a changing climate.
- UM UNESCO Club Webinar: “**Climate Change: What We Need to Know and What Can Be Done?**” featured expert speakers from the United Nations Environment Programme (UNEP) and Universiti Malaya. The session highlighted the urgent need for immediate climate action, presenting practical strategies and innovative approaches for individuals to combat climate change in their daily lives. Attendees gained valuable insights from leading climate researchers and advocates, while also exploring opportunities for networking and collaborating on impactful climate initiatives.
- Tun Ismail Ali Chair (TIAC) Webinar: Titled “**Climate Risk Stress Testing: A Case Study of Malaysia’s Banking System**”, this session delved into the crucial intersection of sustainable financing and climate risk management within the financial sector. The webinar focused on how banks and financial institutions in Malaysia are integrating climate risk assessments into their financial practices to enhance resilience and sustainability.



**Breakfast@UMHealth**  
LIVE WEBINAR SERIES

The Imperative of Climate Action to Promote and Protect Health in Asia

**Professor Dr. Victor Hoe Chee Wai**  
Head, Department of Social & Preventive Medicine, Faculty of Medicine, Universiti Malaysia

**Professor Dr. Noran Nagiah Hairi**  
Chair, Health and Wellbeing Research Cluster, Institute of Research Management & Monitoring, Universiti Malaysia

Is Whole Exome Sequencing (WES) the Answer to End the Diagnostic Odyssey in Rare Diseases?

**Dr. Tan Sok Wan**  
Paediatrician and Senior Lecturer, Genetic and Metabolism Unit, Department of Paediatrics, Faculty of Medicine, Universiti Malaysia

**Professor Dr. Tiong Meow Keong**  
Consultant Clinical Geneticist, Genetic and Metabolism Unit, Department of Paediatrics, Faculty of Medicine, Universiti Malaysia

EPISODE 43 | 2023

Wednesday, 12th April 2023 | 8:00-9:00 AM | LIVE ZOOM

**Webinar Research Cluster Public Forum:**  
**CLIMATE CHANGE & POWER OUTAGES**

2 February 2023 (Thursday)  
10.00 am - 11.30 am  
YouTube Live  
(<https://youtu.be/Sy0AI3pQkZE>)

**Panel 1**  
Prof. Ir. Dr. Hazlie Mokhsia  
Resiliency of Electrical Power Supply System

**Panel 2**  
Assoc. Prof. Dr. Wee Yeap Lau  
Impact of Power Outages to Economy Growth

**Panel 3**  
Assoc. Prof. Ir. Dr. Hazlee Azil Illias  
Lightning Safety

**Moderator**  
Assoc. Prof. TPR, Dr. Goh Hong Ching  
Chair, Social Advancement & Happiness (SAH) Cluster

Open to All!

**WEBINAR**  
**CLIMATE CHANGE: WHAT WE NEED TO KNOW AND WHAT CAN BE DONE?**  
"ITS OUR CALL TO ACTION"

SPECIAL ADDRESS BY  
**YBHG. (HONORABLE) DR. IYAD ABU MOGHLI**  
FOUNDER AND DIRECTOR  
UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)  
FAITH FOR EARTH INITIATIVE

**SPEAKER 1**  
**ASSOC. PROF. DR. ZULILHAM ZULKIFLEE LUBES**  
ASSOCIATE PROFESSOR  
ENVIRONMENTAL SCIENCE AND MANAGEMENT  
INSTITUTE OF BIOLOGICAL SCIENCES  
FACULTY OF SCIENCE  
UNIVERSITI MALAYA

**SPEAKER 2**  
**ASSOC. PROF. DR. HELENA MUHAMAD YANKEEY**  
ASSOCIATE PROFESSOR  
DEPARTMENT OF INTERNATIONAL AND STRATEGIC STUDIES  
FACULTY OF ARTS AND SOCIAL SCIENCES  
UNIVERSITI MALAYA

**MODERATOR:**  
SUNILA MOHAMMAD  
PRESIDENT  
UNIVERSITI MALAYA UNESCO CLUB  
(UMUC)

15 JUNE 2023, THURSDAY  
2.00 P.M. (MALAYSIA TIME)  
ZOOM

FOR REGISTRATION  
E-CERTIFICATES WILL BE GIVEN TO PARTICIPANTS WHO FILL UP THE EVALUATION FORM

**Above (left to right):** Breakfast@UMHealth live webinar series (source: UM Faculty of Medicine); Webinar research cluster public forum: "Climate Change and Power Outages" (source: UM Social Advancement & Happiness Cluster); Webinar on "Climate Change: What We Need to Know and What Can Be Done" (source: UNESCO)

**Below:** Webinar on "Climate Risk Stress Testing: A Case Study of Malaysia's Banking System" (source: Tun Ismail Ali Chair); Seminar on "Blue Carbon Dynamics in Coastal Vegetated Ecosystems: Nature-based Solutions for Climate Change Mitigation?" (source: UM IOES)

**Climate Risk Stress Testing | A Case Study of Malaysia's Banking System**

Date: 25 July 2023 (Tuesday)  
Time: 2.30pm-3.30pm  
Platform: Microsoft Teams  
URL: <https://bit.ly/30597y8>

**Dr Lim Kok Tiong**  
Faculty of Business & Economics, Universiti Malaysia

An incumbent advising financial services industry across APAC. Prior undertakings at Moody's Analytics and Deloitte in Director capacity. Research interest: asset pricing, credit rating, sustainable financing and climate risks

**IOES Seminar Blue Carbon Series**

**Prof. Dr. Martin Zimmer**  
Having earned a PhD in soil ecology from University of Cologne, Germany, Prof. Martin Zimmer is a renowned coastal ecologist with more than 125 peer-reviewed papers and 27 book chapters, h-index of 42 and more than 5400 citations. He currently leads the group of Mangrove Ecology at the Leibniz-Centre for Tropical Marine Research and works on the links between community structure, ecosystem processes and services, and sustainable use and management of tropical coastal systems, focusing on biotic interactions, how they are driven by environmental conditions and how this translates into ecosystem processes.

**Blue Carbon Dynamics in Coastal Vegetated Ecosystems: Nature-based Solutions for Climate Change Mitigation?**

18 Sept 2023  
9:30am - 11:00am  
Anggerik Room (Face to Face)  
Level 2 Block D, Advanced Studies Complex, Universiti Malaysia

Scan to Register

**ANALISIS**

**Klimaks Bencana Alam: Bersediakah Kita?**

5 MEI 2023 | JUMAAT - 6 PETANG

**MAN & NATURE**

**THE LINK BETWEEN ESG AND CLIMATE CHANGE**

Sunday, 5 February 2023  
5.00 p.m. (GMT+8)

**DR. SHAIKH MOHD SAIFUDDIN BIN SHAIKH MOHD SALLEH**  
Director of Research, Research Management Unit, Institute of Marine Understanding Malaysia

**ASSOCIATE PROFESSOR DR. ZULILHAM BIN ZULKIFLEE LUBES**  
Environmental Science and Management Program, Institute of Biological Sciences, Faculty of Science, Universiti Malaysia

**ANTARTIKA PENGARUHI PERUBAHAN IKLIM TROPIKA**

**PROFESOR EMERITUS DATO' DR. AZIZAN ABU SAMAH**  
AHLI LEMBAGA PEMEGANG AMANAH YAYASAN PENYELIDIKAN ANTARTIKA SULTAN MUZAN

ISNIN | 11 DESEMBER 2023 | 9.25 PAGI

spm Nadi Seri Pagi

**Above (left to right):** "Klimaks Bencana Alam: Bersediakah Kita?" (source: TV Alhijarah); "Man and Nature: The Link Between ESG and Climate Change" (source: IKIM); "Antartika Pengaruhi Perubahan Iklim Tropika" (source: RTM)

- The Institute of Ocean and Earth Sciences (IOES) Seminar Blue Carbon Series Webinar: A session titled “**Blue Carbon Dynamics in Coastal Vegetated Ecosystems: Nature-Based Solutions for Climate Change Mitigation**”. This webinar, led by a distinguished coastal ecologist from the University of Bremen, Germany, provided a comprehensive analysis of how coastal vegetated ecosystems - such as mangroves, seagrasses, and salt marshes - play a crucial role in mitigating climate change. The seminar highlighted how these essential habitats sequester carbon, support biodiversity, and offer effective nature-based solutions to address climate challenges.
- UM Geology Staff Appear on TV Alhijrah: “**The Climactic Natural Disasters – Are We Prepared for What’s Next?**” In this segment, a staff member from Universiti Malaya’s Department of Geology made a prominent appearance on TV Alhijrah, addressing the critical issue of natural disasters. The discussion centered on the growing frequency and intensity of natural calamities and explored strategies for improving societal preparedness and resilience. The talk highlighted the urgent need for comprehensive disaster preparedness plans and proactive risk management to mitigate the impacts of these events. By offering expert insights into the causes and consequences of natural disasters, the UM geologist contributed valuable knowledge aimed at enhancing public awareness and fostering more effective responses to future challenges.
- Interview on “Selamat Pagi Malaysia”, TV1 RTM: “**Antarctica’s Influence on Tropical Climate Change**”. During the interview, Professor Emeritus Dato’ Dr. Azizan Abu Samah elaborated on the critical role that Antarctica plays in shaping global climate patterns, particularly its impact on tropical regions.
- IKIMfm Radio Station featured a talk titled “**Man & Nature: The Link Between ESG and Climate Change**”, delivered by a distinguished lecturer from the Institute of Biological Sciences at Universiti Malaya. This engaging discussion explored the intricate relationship between environmental, social, and governance (ESG) criteria and their impact on climate change. The lecturer provided insights into how ESG principles can drive sustainable practices and influence climate action, highlighting the critical role of responsible governance in mitigating environmental challenges.
- The Department of Science and Technology Studies Webinar: Titled “**Climate Change Storytelling in Social Media**”, supported by the Science Media Centre, this session provided a comprehensive exploration of effective communication strategies for engaging the public on climate change issues. The session offered practical guidance on crafting relatable and impactful content to enhance public understanding and action. It covered techniques for tailoring messages to diverse audiences, using storytelling to connect emotionally with viewers, and leveraging social media platforms to maximise reach and influence. Participants learned how to create compelling narratives that resonate with people’s values and concerns, aiming to foster greater awareness and inspire proactive climate action.
- Superhero Iklim Initiative Webinars: These included “**Climate Change Mitigation: What Can I Do?**” and “**Energy Management at Universiti Malaya**”, featuring speakers from UNICEF Malaysia’s Youth Climate Champion and the UM Sustainable Development Centre. The webinars aimed to provide actionable insights and strategies for personal and institutional climate action.



**Climate Change Storytelling in Social Media**  
with Tan Su Lin, Science Media Centre Malaysia

**Climate Change Mitigation: What Can I Do?**  
with Aidil Iman Aidid, Youth Climate Champion

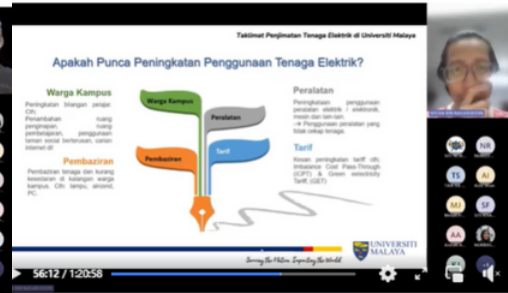
**Energy Management at Universiti Malaya**  
with Affan Nasaruddin, Research Officer, UMSDC



Watch the recording here: [linktr.ee/superheroiklim](https://linktr.ee/superheroiklim)



Watch the recording here: [linktr.ee/superheroiklim](https://linktr.ee/superheroiklim)



Watch the recording here: [linktr.ee/superheroiklim](https://linktr.ee/superheroiklim)

**Above (left to right):** The three climate change webinar series under Superhero Iklim (Source: UMSDC)

**Universiti Malaya Research Gallery: Climate Action & Planetary Health**

On 7 June 2023, Universiti Malaya (UM) launched the Research Gallery with the theme “Climate Action & Planetary Health”. Held during the Universiti Malaya Sustainability Festival 2023, the event coincided with World Environment Day, which promotes planet preservation.

The gallery showcased innovative research on mitigating the impacts of climate change on planetary health. In line with the World Environment Day theme, “Solutions to Plastic Problems”, it emphasised the urgent need for sustainable solutions. UM’s initiative raises awareness and fosters collaboration among researchers, experts, and the community - key to addressing climate issues.

Special recognition goes to the Faculties of Built Environment, Arts and Social Sciences, Engineering, Science, Business and Economics, Dentistry, Centre for Foundation Studies, Institute for Advanced Studies, Research Cluster Office, UMSDC, UMPEDAC, NARC, and Mushroom Research Centre. These collaborations highlight the diverse expertise driving climate action and planetary health.

The gallery also received support from external partners such as Yayasan Penyelidikan Antarctica Sultan Mizan, Global Tunikara Sdn. Bhd., SEDA, and TNB Research Sdn. Bhd., reinforcing UM’s dedication to advancing knowledge and promoting research for societal benefit.

**Below:** Exhibitors at the Universiti Malaya Research Gallery: Climate Action & Planetary Health



## Empowering Rural Youth: Climate Change Education in Sabah's Coastal Schools

Universiti Malaya (UM) researchers, led by TPr Dr. Goh Hong Ching and Dr. Lee Soon Loong, conducted the “Student Empowerment in Climate Change in Sabah” project with support from Yayasan Sime Darby (YSD) and the Sabah Environmental Trust (SET). The project team includes senior and junior UM researchers with multidisciplinary backgrounds from the Blue Communities project, bringing extensive expertise in capacity building on climate issues in coastal regions.

The project aims to enhance climate change knowledge and awareness among secondary school students and to foster proactive attitudes in coastal rural schools across three districts in Sabah. The target group consists of Form 1 and Form 2 students from 14 secondary schools in the districts of Kudat, Kota Marudu, and Pitas, where the Tun Mustapha Park (TMP) is located.

As one of the largest and first multi-use marine parks in Malaysia, TMP is moderately vulnerable to climate change impacts like typhoons and monsoons. The park’s surrounding coastal communities, heavily reliant on the marine environment for their livelihoods, health, and well-being, are particularly at risk. Kudat, Kota Marudu, and Pitas are among the poorest districts in Sabah and Malaysia, making these communities, especially the younger generation, more susceptible to the effects of climate change. Though a recent survey by Blue Communities MY found that 76.6% of TMP residents have received formal education up to secondary level, rural students still face a significant information gap compared to their urban counterparts, who benefit from better infrastructure and access to climate-related information.

Project activities included training workshops for “environmental ambassadors” and teachers, talks from invited speakers on climate change and climate action, addressing misconceptions, and organising youth competitions to showcase creative outputs on climate change and environmental issues based on themes developed in reflection sessions.

*Below: UM researchers with secondary school students during the training workshops*





Among the project outputs, seven environmental education modules were developed and are currently pending review by the Sabah State Education Department. These modules cover Rainwater Harvesting, School Gardening, Trash Clean-up, Upcycling, Natural Pigments, Mangrove Nursery, and a creative writing activity titled “The Journey of Rubbish”. Two Introduction and Environmental Ambassador Training Workshops were completed in June/July and August 2022, followed by Teacher Workshops in July 2023, involving teachers and representatives from 14 schools. All 70 on-ground environmental education module projects were successfully implemented across the 14 schools.

Additionally, two online mentorship sessions on Carbon and Water Footprint Monitoring were conducted with students. The mangrove nursery module led to the establishment of a mangrove nursery program in collaboration with the Sabah Wetland Conservation Society on a private plot, D’Pagung, at Kg. Asin-Asin, Kota Marudu, Sabah. Four creative output competitions were held among students, featuring categories like Drawing or Sculpture, Poems and Narratives, Songwriting, and Comic Book Strips. A booklet titled “Empowering Youth Voices: Tun Mustapha Park’s Perspectives in the Canvas of Climate Change” was published, compiling the winners and entries from these competitions.

Inter-school pitching competitions were held in each district - Kudat, Kota Marudu, and Pitas - in November 2022, with a final inter-district competition in January 2023. Following the final competition on January 16, 2023, the top three winners were sponsored to attend the 19th International School Brunei’s Borneo Global Issues Conference (ISB BGIC) at the International Convention Centre, Brunei Darussalam, from 10 - 13 March 2023.

## Empowering Youth Voices: Tun Mustapha Park’s Perspectives in the Canvas of Climate Change

Student Empowerment in Climate Action in Sabah (SECA)



**Above:** The cover of the educational book “Empowering Youth Voices: Tun Mustapha Park’s Perspectives in the Canvas of Climate Change”, developed by UM researchers

**Below:** Students working at the mangrove nursery, a key output from the mangrove nursery module





## UM Student-Led Initiative for Climate Change Awareness and Impact Reduction

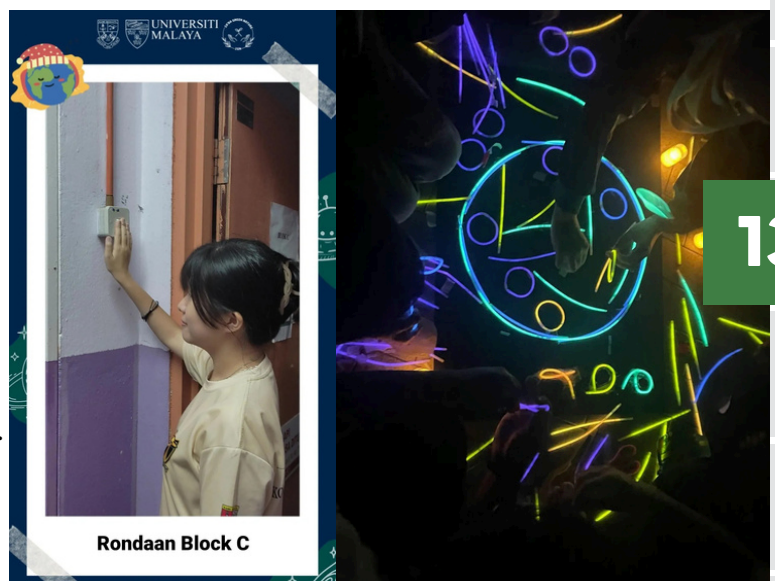
- The Environmental Science and Management Club (SPAS):** In line with local educational programs and climate change campaigns, SPAS students marked World Environment Day with activities aimed at increasing awareness of climate change risks and promoting mitigation strategies. Their events included an exhibition, a “Trash to Cash” activity where participants could exchange recyclables for cash, organised together with SWCorp, and an interactive quiz. These initiatives support educational efforts to understand and mitigate environmental impacts, encouraging students to embrace sustainable practices and adapt to climate-related challenges.



- Kolej Kediaman Dayasari Going Green Program:** This initiative reflects local campaigns focused on recycling and waste reduction, key components of climate change mitigation and adaptation. By facilitating the exchange of recyclables for food truck coupons, the program not only incentivises proper waste management but also integrates educational aspects of resource conservation into everyday student life, promoting practical steps towards impact reduction.



- Secolian (2nd Residential College) and Za'ba (7th Residential College):** Their celebration of Earth Hour 2023 aligns with local campaigns promoting awareness of climate change impacts and the importance of energy conservation. By participating in this global event, students contribute to raising awareness about the effects of excessive energy use and engage in community-based activities that support early warning systems and preparedness. The interactive games and bonding activities during Earth Hour also serve to educate and mobilise peers on climate resilience and collective action.



## Universiti Malaya Climate Action Plan: Strategies for Sustainable Impact

The University’s Climate Action Plan is outlined in several key documents and is frequently shared with the internal university community, as well as with local government and community groups during stakeholder meetings, seminars, and conferences. These engagements foster collaboration and raise awareness about the university’s sustainability initiatives.

In the UM Transformation Plan 2021-2030 (page 56), the Green Campus objective is emphasised, aiming to create a sustainable, carbon-neutral campus. The University believes that it can lead in fostering a green and low-carbon culture within the campus community by enhancing existing sustainability programs and developing energy-efficient buildings and infrastructure. To achieve this, five key strategies are outlined:

1. Strengthening the management of sustainability practices through an organised, impactful structure that develops and enforces relevant policies.
2. Reducing greenhouse gases and carbon emissions by adhering to green building standards.
3. Enhancing energy efficiency, installing on-site renewable energy generation, and improving water and waste management to move toward carbon neutrality within 5 to 10 years from 2021.
4. Mitigating urban heat island effects, managing stormwater to prevent flooding, conserving campus biodiversity, and improving campus mobility.
5. Actively promoting sustainability awareness and practices within the campus community to ensure a lasting impact.

13

**Strategies**

Key to enhancing the learning and working environments, Universiti Malaya must transform into a sustainable campus by adopting these strategies:

- 1 Strategy 1:** To improve the management of sustainability practices through a coherent and impactful organizational structure that will develop and implement relevant policies.
- 2 Strategy 2:** To limit the greenhouse gases carbon emissions and comply with green building standards. All new buildings and existing building upgrades must be energy efficient
- 3 Strategy 3:** To improve the campus-wide energy efficiency, install large on-site energy generation, and improve water efficiency and waste management. Together, these three strategies will pave the way for the UM campus to be carbon neutral within 5 to 10 years from 2021.
- 4 Strategy 4:** To mitigate the surrounding urban heat island effect, reduce the risk of flooding through efficient storm water management, conserve the campus biodiversity and ecology, and improve campus mobility
- 5 Strategy 5:** To actively promote sustainability awareness and practices among the campus community, *GreenCulture@UM* through these two High Impact Programmes (HIPs):
  - » UM Sustainability Policy
  - » Green Culture Activities

### Pillar 3: Environment

#### 7 Net Zero Campus

Universiti Malaya is an active member of Sustainable Development Solutions Network (SDSN) Malaysia since 2014 with the establishment of its UM Chapter. With the aspiration to be a net zero campus, all campus sustainability strategies align with the Net zero on Campus guideline introduced by SDSN in 2022. The goal is to become a carbon neutral campus by 2030 and a Just Net-Zero Campus by 2050. Our strategies for achieving a Net-Zero Campus are tailored to our specific needs.

- 1) ENERGY** - Reducing energy use and improving energy efficiency of university and college campuses.  
Key Implementation mechanism: Prioritizing energy conservation, transitioning to electricity from fossil fuels, creating campus microgrids with renewables, and securing renewable energy through purchase agreements.
- 2) MOBILITY** - To reduce emissions associated with mobility and transport.  
Key Implementation mechanism: Promoting sustainable commuting through co-existing, public transport improvements, pedestrian/cycling infrastructure, incentives, and a transition to a zero-emission vehicle fleet. Business travel prioritizes virtual meetings and public transport.
- 3) FACILITIES** - Reducing the building's energy demand and lowering emissions related to building materials and waste.  
Key Implementation mechanism: Enhancing sustainability by upgrading equipment, transitioning to electric power, retrofitting existing buildings for energy efficiency, and integrating sustainability into new construction projects.
- 4) WASTE AND RECYCLING** - Minimizing emissions by emphasizing waste reduction, material efficiency, and campus recycling practices.  
Key Implementation mechanism: Focusing on waste avoidance, material waste reduction, and promoting reuse and recycling through circular economy practices, behavior change programs, and on-campus material recovery initiatives.
- 5) VALUE CHAIN** - To establish sustainable procurement policies across the supply chain, encouraging net-zero practices and supplier commitment to sustainability despite challenges.  
Key Implementation Mechanism: Establishing sustainable procurement policies addressing emissions across the supply chain, promoting eco-friendly products, local sourcing, and supplier commitment to sustainability.
- 6) BEYOND CAMPUS OPERATIONS** - Implementing net zero initiatives within campus operations to drive down emissions.  
Key Implementation Mechanism: Driving emissions reduction by sharing expertise, involving students in decarbonization efforts, supporting net-zero education and research, and promoting innovation both on and off-campus.

**Above (left):** Excerpt from the *UM Transformation Plan* (page 56), featuring the “Green Campus” initiative: <https://strategy.um.edu.my/img/files/UMTP%20Booklet%202021-2030.pdf>

**Above (right):** Excerpt from the *UM Sustainability Policy 2021-2023* (page 20), highlighting the “Net Zero Campus” goal



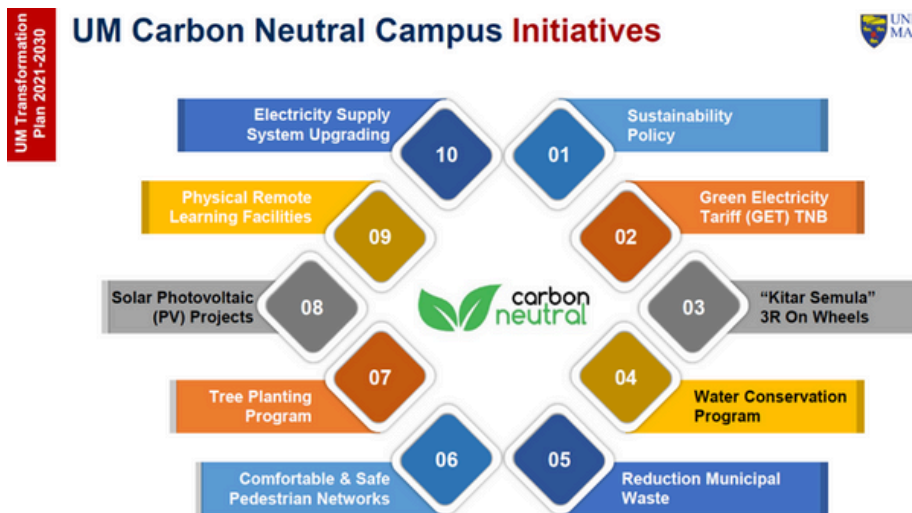
In the UM Sustainability Policy 2021-2030 (page 6), Universiti Malaya emphasises its commitment to SDG 13: “Take urgent action to combat climate change and its impacts”. The University is dedicated to enhancing its efforts in education, awareness, and capacity-building on climate change mitigation, adaptation, impact reduction, and early warning systems. This commitment aims to achieve a Carbon Neutral Campus by integrating climate change measures into strategies and planning at all levels of the institution.

On page 20, under Pillar 3: Environment, a special section focuses on the “Net Zero Campus”. As an active member of the Sustainable Development Solutions Network (SDSN), UM’s sustainability strategies are aligned with the Net Zero on Campus Guideline introduced by SDSN in 2022. The goal is to become a carbon-neutral campus by 2030 and achieve a Just Net-Zero Campus by 2050. UM’s tailored strategies for reaching this target include:

1. Energy – Reducing overall energy consumption and improving energy efficiency on university and college campuses.
2. Mobility – Reducing emissions associated with transportation and campus mobility.
3. Facilities – Lowering energy demand and emissions from buildings, focusing on building materials and waste reduction.

4. Waste and Recycling – Minimising emissions through waste reduction, material efficiency, and improved recycling practices.
5. Value Chain – Establishing sustainable procurement policies to promote net-zero practices across the supply chain, encouraging supplier commitment despite challenges.
6. Beyond Campus Operations – Implementing net-zero initiatives within campus operations to significantly reduce emissions and promote sustainability.

Each year, the Universiti Malaya community gathers at the Tunku Canselor Hall for the Vice-Chancellor’s New Year address, which is also broadcasted on platforms like YouTube and social media. In his 2023 address, Professor Dato’ Ir. Dr. Mohd Hamdi Abd. Shukor, Vice-Chancellor of Universiti Malaya, highlighted the university’s strong commitment to sustainability and presented key initiatives under the UM Carbon Neutral Campus program. These initiatives included the implementation of a comprehensive Sustainability Policy, the adoption of the Green Electricity Tariff (GET) with TNB, and the launch of the Recycling 3R on Wheels program. Other notable efforts involved water conservation, reducing municipal waste, improving pedestrian networks for comfort and safety, tree planting, expanding solar photovoltaic (PV) projects, and upgrading both physical and remote learning facilities, alongside enhancements to the campus electricity supply system.



*Left: The Vice Chancellor’s New Year address, focusing on UM’s Carbon Neutral Campus initiatives*

## UM Joins Government Advisory Panel on Climate Action

UM takes a proactive role in addressing the challenges of climate change. The university actively collaborates with government agencies to develop and implement strategies and policies, conduct research, and engage in practical planning to mitigate climate change impacts.

Universiti Malaya has been appointed as a Climate Change Advisory Panel by the Ministry of Natural Resources and Environmental Sustainability (NRES) (formerly known as Ministry of Natural Resources, Environment and Climate Change (NRECC)) on 21 August 2023. In this capacity UM contributed in the Technology and Innovation Cluster, chaired by YBhg. Tan Sri Zakri Abdul Hamid.

The advisory panel's primary purpose is to provide guidance on the development of climate change policies and support national delegations attending the United Nations Framework Convention on Climate Change (UNFCCC) Conferences of the Parties (COP). It aims to ensure that climate policies align with best practices, current research, and new developments in the field. This appointment aligns with the Government's goal of enhancing national climate change mitigation and adaptation strategies.

The Universiti Malaya Climate Change Advisory Committee brings together leading experts from various faculties and institutions within the university to develop and implement a comprehensive strategy for active climate action on both national and global scales. The committee also played a key role in facilitating the participation of four UM academics at the UNFCCC COP28 held in Dubai.

Looking ahead, the Committee aims to secure observer status for Universiti Malaya at future UNFCCC meetings, enabling our academics to engage directly in COPs and other related events. As a premier institution in a developing country, UM's active involvement in climate science, both physical and social, is crucial for ensuring a fair and equitable transition for Malaysia in line with the principle of Common but Differentiated Responsibilities and Respective Capabilities.

**Right:** The Universiti Malaya Climate Change Advisory Committee and their responsibilities



In 2023, Universiti Malaya (UM) was appointed as a member of the Advisory Panel to the Ministry of Natural Resources and Environmental Sustainability (NRES) in the lead-up to COP28 in Dubai. This appointment provided UM academicians with a direct channel to share ideas with the ministry and enabled UM to receive party overflow badges, granting access to COP28.

COP28, held from 30 November to 12 December 2023, attracted approximately 70,000 attendees, including four UM academicians and one board member representing UM under the Malaysian Government's party overflow badge. With this badge, UM had access to actual negotiation sessions, a unique opportunity for direct engagement at the highest levels of climate dialogue.

UM's presence was also prominent at side events. Associate Professor Dr. Helena Varkkey from the Department of International and Strategic Studies was invited to speak at a Harvard University side event on reducing global methane emissions. She shared insights from her recent project on Malaysia's progress in methane reduction, contributing valuable perspectives on this critical environmental issue.

Such participation gives UM a rare platform to engage directly with UN officials, national delegates, and diverse stakeholders, fostering immediate feedback, collaborative ideas, and networking opportunities. This experience offered UM valuable insights to bring back to policy discussions and academic collaborations.

At the Malaysia Pavilion, UM played an active role. Dr. Jillian Ooi presented two talks on "Seruan Setu", her innovative project combining art and science to highlight the importance of Malaysia's seagrass ecosystems through a gamelan performance. Meanwhile, Dr. Sheeba Chenoli organised a panel on open science, featuring esteemed Malaysian and international speakers, including a scientist from the Intergovernmental Panel on Climate Change (IPCC). UM is proud to support Malaysia's mission toward a just transition for its people, championing sustainability and climate action at the global stage.

**Below:** Dr. Jillian Ooi at the Malaysia Pavilion during COP28 (Photo source: Malaysia Pavilion)



## Universiti Malaya Climate Change Network (UMCCRN)

The university actively engages in cooperative planning by partnering with a range of stakeholders, including government bodies. The Universiti Malaya Climate Change Research Network (UMCCRN) comprises both researchers from Universiti Malaya and representatives from the Ministry of Natural Resources and Environmental Sustainability (NRES). This network is dedicated to advancing climate change research and coordinating projects led by UM researchers, with a focus on issues pertinent to Malaysia and Southeast Asia.

UMCCRN aims to enhance climate change knowledge and facilitate multi-stakeholder engagement in developing and implementing innovative mitigation strategies. The network's objectives include advancing understanding of climate change phenomena, assessing impacts, and exploring adaptation and policy responses through a multidisciplinary approach.

The network is committed to strengthening human capacity through scientific, social, and technical means. By fostering vital connections among researchers and academics, UMCCRN supports multidisciplinary and integrated strategies to address climate change challenges, including disaster management related to extreme weather events.

UMCCRN's diverse stakeholder group includes multidisciplinary researchers, civil society actors, government officials, technical experts, and representatives from local and indigenous communities. This broad engagement ensures a comprehensive dialogue and collaborative effort towards effective climate change mitigation and adaptation solutions.

Source: <https://fass.um.edu.my/research-centre-amp-research-network>

Name	Special topic groups
Dr. Sheeba Nettukandy Chenoli (FASS,UM)	Leader
A P Dr Helena Muhamad Varkkey (FASS,UM)	Climate change policy and climate action
Dr. Tengku Adeline Adura Tengku Hamzah (FASS, UM)	Climate change governance
Dr Mariney Mohd Yusoff (FASS, UM)	Climate change and urban society
Dr. Kamal Solhaimi Fadzil (FASS,UM)	Climate change and indigenous knowledg
Dr. Nisfariza Mohd Noor (FASS, UM)	Monitoring of land use and environmental change
Dr. Nor Shahida binti Azali (FASS, UM)	Climate change impacts on the coastal region
Dr. Wee Chea (IOES)	Climate change and Ocean (Associate member)
Pn Siti Nooraznie Abdul Rahim Principal Asst Secretary, Water Resources and Hydrology Division, KASA	Climate change adaptation (water adaptation and climate resilience)
(Associate member) Dr. Zainorfarah Zainuddin Principal Asst Secretary, GHG Inventory and Reporting Unit, Climate Change Division, KASA	GHG Inventory and Carbon Trading (Associate member)

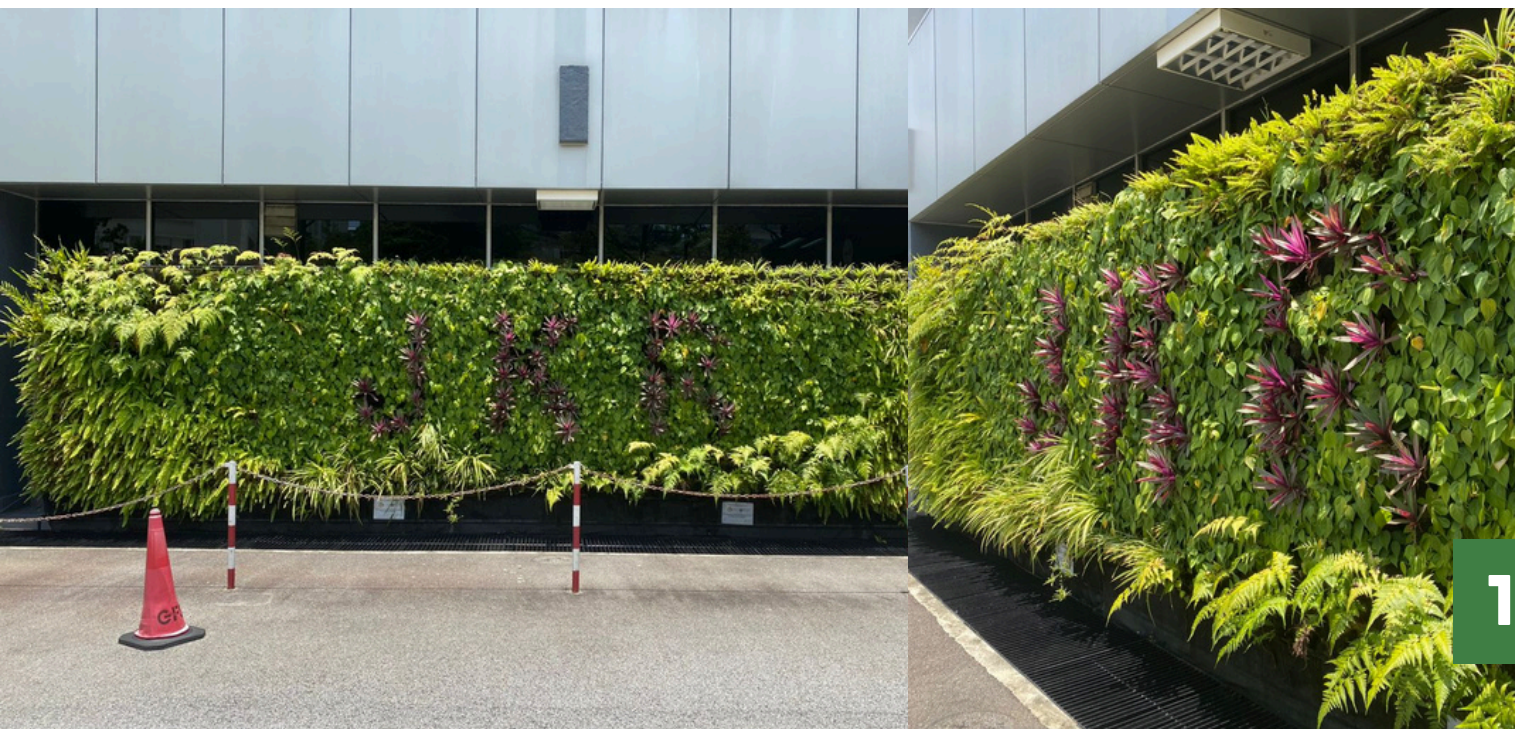
**Above:** A list of UM researchers and government agencies involved in the UM Climate Change Network (UMCCN) (Source: Faculty of Arts and Social Sciences: <https://fass.um.edu.my/research-centre-amp-research-network>)



## UM Develops Innovative Low-Maintenance Green Wall Prototype for Ministry of Works Malaysia (JKR) to Address Urban Heat Island Effect

The Department of Building Surveying at the Faculty of Built Environment has developed a Vertical Greenery System (VGS), or green walls, to promote sustainable urban environments. VGS offers significant social, economic, and environmental benefits, including lowering urban heat island temperatures, reducing air and noise pollution, and absorbing rainwater to decrease runoff. By installing VGS on building facades, energy consumption is reduced due to its thermal insulation properties, which help maintain indoor temperatures. Choosing the right plant species is essential to maximise cooling effects, carbon sequestration, and habitat provision.

By addressing the urban heat island effect, the green wall prototype helps lower temperatures in urban areas. This reduction in temperature can alleviate heat-related health risks and energy demands during heatwaves, making cities more resilient to climate extremes. Despite these advantages, VGS has not been widely adopted in government buildings, where energy-efficient designs are prioritised. Instead, it is mainly used in commercial buildings in urban areas. The green wall prototype, completed in 2023 and installed at the JKR Headquarters, effectively reduces the heat island impact, improves heat transfer efficiency, and contributes to carbon sequestration, thereby mitigating climate change. This initiative highlights a commitment to practical, climate-resilient infrastructure solutions.



**Above:** The Vertical Greenery System (VGS), designed by UM researchers at Ministry of Works Malaysia (JKR) Headquarter



## Informing and Supporting Government on Early Warning and Risk Management

UM supports local and regional governments in managing climate change-related disasters and risks through early warning and monitoring systems. UM offers local and regional authorities essential data on climate change risks and potential disasters.

This includes information on emerging threats, and trends that could impact their area, helping governments stay informed about potential hazards.

## Advanced Slope Monitoring System Deployed in Blue Valley to Enhance Local Climate Risk Management

In 2023, the Photonics Research Centre and Pintas Utama Sdn. Bhd. collaborated to deploy a cutting-edge optical fiber-based slope monitoring system in Blue Valley, Cameron Highlands. Spearheaded by Datuk Prof. Ulung Dr. Harith Ahmad, this initiative aims to bolster local and regional government efforts in early warning and monitoring of climate-related risks.

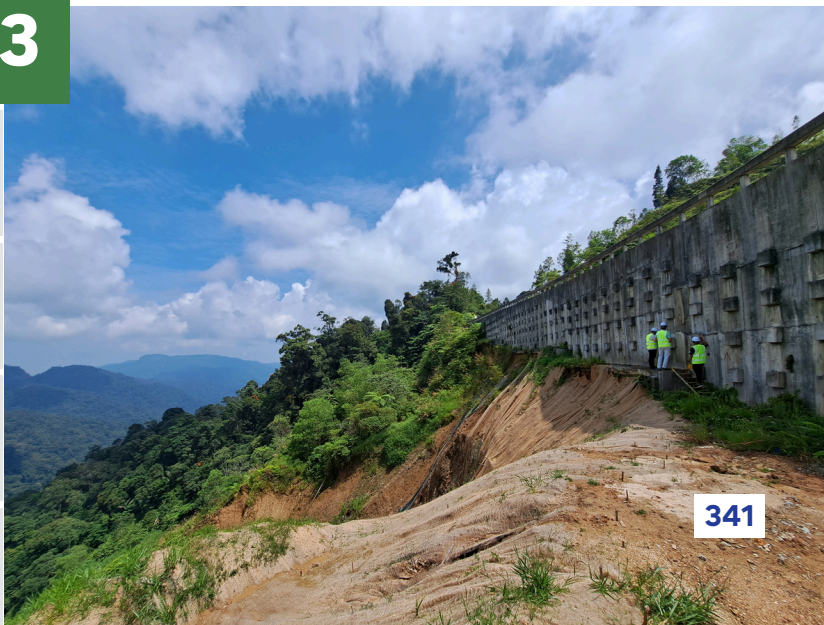
The Cameron Highlands' steep, mountainous terrain poses significant risks of landslides, particularly during heavy rainfall. Known for its picturesque tea plantations and cool climate, this region faces challenges due to its steep slopes and unstable soil conditions. Landslides in this area can have devastating effects, including loss of life and damage to property.

The newly installed optical fiber-based monitoring system is designed to provide critical early warnings for potential slope failures. By delivering real-time data on slope movement and environmental conditions, the system helps detect anomalies that could signal impending landslides. This capability allows for timely alerts to be issued to local authorities and residents, facilitating prompt evacuation and risk mitigation.

This advanced monitoring system supports local and regional governments by providing essential tools for climate risk management and disaster preparedness. It enhances the ability to anticipate and respond to slope failures, contributing to effective disaster risk reduction, climate adaptation, and environmental protection. In alignment with Sustainable Development Goal 13: Climate Action, the system plays a crucial role in safeguarding communities and infrastructure against climate-induced hazards.

**Below:** UM researchers during the study on slope monitoring system at Cameron Highlands

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In January 2023, Universiti Malaya (UM), through UM Capital Berhad and the Photonics Research Centre, signed a Memorandum of Agreement (MOA) with Pintas Utama Sdn. Bhd. to install optical fiber sensors in areas prone to landslides.

The MOA was signed by Prof. Ir. Dr. Shaliza Ibrahim, Deputy Vice-Chancellor (Research & Innovation) of UM, Dato' Ir. Marhalim Mohamed, CEO of Pintas Utama, and Mohd Zaid Abdul Jalil, CEO of UM Holdings Group, with the ceremony witnessed by the Chairman of the Board of Directors of UM and the Executive Chairman of Pintas Utama. Dato' Zahrul Hakim Abdullah, Deputy Secretary General (Policy & Development Sector) of the Ministry of Works, also attended.

This collaboration highlighted the synergy between Pintas Utama and Universiti Malaya in developing an effective slope monitoring system. Pintas Utama contributed expertise in civil engineering, while UM provided optical fiber sensors developed by PhD students Muhammad Syamil Mohd Sa'ad and Mohamad Ashraff Alias under the supervision of Datuk Professor Ulung Dr. Harith Ahmad.

Through such collaborations, Universiti Malaya has successfully produced experts across various fields, contributing to national development. This initiative also inspires IPT students to explore research and development (R&D) and innovation, both essential for shaping Malaysia's future.



**Above:** Photos capturing the signing of the Memorandum of Agreement (MOA) between Universiti Malaya and Pintas Utama Sdn. Bhd.

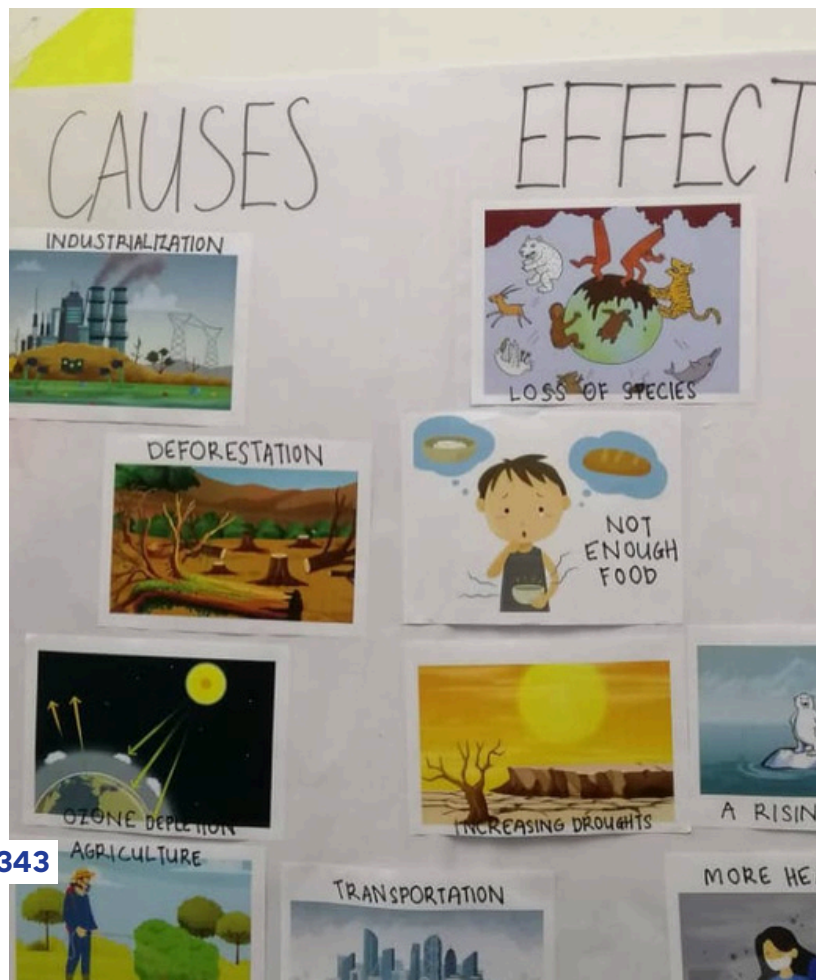
## Teleconnection between Antarctic Sea Ice Extent and Summer Monsoon

UM researcher has examined how warming in the Arctic and Antarctic influences weather and climate patterns in Malaysia and the broader tropics. Utilising global datasets such as ERA5 and climate projections from CMIP6, the study investigates how rapid polar warming impacts tropical weather and climate. It delves into the mechanisms, including Rossby waves, meridional circulations, and sub-tropical highs, that link polar and tropical climates through teleconnections. Additionally, the research assesses how future global warming may intensify these processes using CMIP6 data. This project, part of the SCAR Tropical Antarctic Teleconnection (TATE) Action Group chaired by Dr. Sheeba Chenoli, enhances local climate change disaster and risk early warning systems by providing essential insights into the effects of polar warming on tropical climate dynamics, thereby improving monitoring and predictive capabilities.



## Partnering with NGOs for Climate Adaptation Education

Universiti Malaya has partnered with several NGOs to develop and implement environmental education programs aimed at enhancing understanding and action on climate adaptation. This collaboration includes organisations such as Fugee School, Blessed Sunway Mentari Learning Centre (SMLC), WWF Malaysia, Climate Governance Malaysia (CGM), and Klima Action Malaysia (KAMY). Together, these partnerships focus on advancing climate adaptation efforts through comprehensive educational initiatives and community engagement.





## The “Climate Crusaders” Initiative for Refugee Education

A dedicated group of students from the International and Strategic Studies program at Universiti Malaya, known as the “Climate Crusaders,” embarked on a transformative project under the Service-Learning Malaysia-University for Society (SULAM) UM initiative. SULAM represents a forward-thinking approach to higher education, aiming to connect students with societal needs and improve lives through practical engagement.

In their SULAM project, the Climate Crusaders partnered with three significant NGOs and refugee learning centers - WWF Malaysia, Fugee School, and Blessed Sunway Mentari Learning Centre (SMLC). Their goal was to provide education on climate change adaptation specifically tailored for climate refugees.

Climate change presents a formidable challenge globally, particularly for vulnerable populations such as refugee children. These children, who have already endured the trauma of displacement due to conflict or persecution, face exacerbated risks from climate-related issues. Extreme weather events, rising sea levels, and other environmental changes can further jeopardise their physical health, mental well-being, and access to essential resources.

The project’s core objective was to raise awareness and educate refugee children in Malaysia about climate change, equipping them with the knowledge and skills needed to navigate these challenges. By focusing on climate adaptation education, the students sought to enhance the resilience and adaptive capacities of Rohingya refugee children, enabling them to make informed decisions about their futures and environments.

**Right (top):** Sharing session on “The Plight of Refugee Children: Climate Change and Their Vulnerable Rights”.

**Right (bottom):** Panel discussion on “Securing the Future of the Climate Refugee”.

Key components of the project included:

- **Forum on “Our Children’s Future in a Changing Climate”:** Held in May 2023, this forum brought together environmental activists and representatives from Fugee School and WWF Malaysia. The forum aimed to educate and inspire the next generation to engage with climate issues and explore sustainable solutions, capturing the attention of young participants and empowering them to take action.



- **Workshops and Training at Fugee School:** Partnering with Fugee School, a recognised refugee learning center supported by UNHCR Malaysia, the students conducted workshops designed to integrate climate change education into the school’s curriculum. Fugee School plays a pivotal role in refugee education and employability in Kuala Lumpur, and these workshops were tailored to bolster the students’ understanding and response to climate challenges.

- **Workshops and Training at Blessed Sunway Mentari Learning Centre (SMLC):** Located in Subang Jaya, SMLC operates as a community-based learning center for refugee children. The students’ workshops at SMLC focused on climate change adaptation strategies, aimed at reinforcing the safety and well-being of children in this community and supporting their path to resettlement.

Through these collaborative efforts, the Climate Crusaders project has not only increased awareness about the intersection of climate change and refugee issues but also empowered refugee children to become proactive in their own climate resilience.



*Above: UM volunteers conducted workshops and training at Fugee School  
Below: Workshops and training at Blessed Sunway Mentari Learning Centre (SMLC)*





## The “Climate Risk and Governance in Malaysia - Broadening Our Horizon Online Forum 2023”

UM, led by the UM Sustainable Development Centre, in partnership with the not-for-profit organisations Climate Governance Malaysia (CGM) and Klima Action Malaysia (KAMY), hosted the “Climate Risk and Governance in Malaysia - Broadening Our Horizon Online Forum 2023”. This event was held in conjunction with the National Climate Governance Summit 2023.

Climate Governance Malaysia, powered by volunteers including non-executive directors, social activists, and public members, focuses on the role of businesses in addressing climate risks and opportunities. Klima Action Malaysia (KAMY) advocates for Malaysia to declare a climate emergency and incorporate environmental rights into the constitution, emphasising human rights and the empowerment of vulnerable communities in climate governance.

The forum brought together a diverse group of stakeholders, including policymakers, academics, researchers, and student leaders, to explore critical climate issues facing Malaysia. Discussions covered the range of climate risks from extreme weather events to long-term environmental impacts, aiming to foster a shared understanding of these challenges and the urgent need for action.

The event highlighted successful collaborations between government bodies, private enterprises, academic institutions, and civil society, showcasing innovative solutions, technological advancements, and best practices in climate governance. Emphasis was placed on the role of youth and effective strategies to enhance Malaysia’s resilience to climate-related challenges.

The forum served as a catalyst for positive change, promoting dialogue and collaboration among stakeholders to build a climate-resilient and sustainable future for Malaysia. For those interested, the live event recording is available on Climate Governance Malaysia’s YouTube channel: [Watch the Forum](#).



**Left:** During the recording of the “Climate Risk and Governance in Malaysia - Broadening Our Horizon Online Forum 2023”

## Concluding Reflections: UM’s Impact on Climate Action and Sustainable Futures

In its comprehensive approach to climate action, Universiti Malaya exemplifies a model for integrating sustainability into academic and community frameworks. By measuring low-carbon energy use, educating the public, and collaborating with government agencies and NGOs, UM is not only advancing its sustainability goals but also contributing to the global effort against climate change.

Through these multifaceted initiatives, UM continues to foster a resilient and informed community, poised to tackle the evolving challenges of climate change and work towards a sustainable future.