

UNIVERSITI SAINS MALAYSIA

SUSTAINABILITY POLICY 2014

(REVISED 2025)



Universiti Sains Malaysia
Sustainability Policy
2014
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1.0 INTRODUCTION

Over the years, USM has made strong commitments to internal and international efforts to prevent further irreversible environmental change and to promote sustainable development through a host of activities such as Kampus Sejahtera (2000), RCE-Penang (2005), University in a Garden (2006), Research university (2007), the APEX university award (2008), Archaeotourism at USM (2017) and the numerous activities that accompanied these programs - all of which emphasized the need for development to be more equitable, less natural resource intensive, more protective of the environment and above all people centred.

Based on the considerable achievements of USM in laying a strong sustainability foundation in the APEX programme, using the Blue Ocean Strategy, to transform governance, enhance efficiency of human and financial resource management, improve infrastructure, boost research and innovation output, and advances in academic reformations, USM now is poised to enter an ecosphere of sustainability, align with SDGs of United Nations where knowledge, skills, perspectives and value systems symbiotically govern our quest for excellence that will on the one hand generate human capital with first-class mentality and on the other help propel USM to become a sustainability-led university of world-class standing. It is clear that quantum leaps required for sustainability transformations can only be realized with a broad alliance of students and staff working together to secure the sustainability future we want for all.

In its vision to become a sustainability-led university of world class standing, USM has embraced a whole-system sustainability transition which means that we will mainstream sustainability at all levels by integrating social, economic and environmental into our core activities such as teaching, research, community engagement and institutional arrangement.

2.0 POLICY STATEMENT

USM is committed to mainstreaming sustainable development in the core areas of the university to produce graduates and staff with first class skills and thinking, research excellence, community engagement and best practices that will make USM a sustainability-led university of world-class standing.

This policy is conceived and endorsed following a ‘whole system’ approach involving teaching, research, community engagement and institutional arrangement that make up USM’s major domains of focus. The major thrust of this policy is to mainstream sustainability into the core mission areas of USM to secure the future we want for all.

3.0 VISION AND MISSION

3.1 Vision

To Empower Institutional Transformation for a Sustainable Tomorrow.

3.2 Mission

3.2.1 Integrating sustainability curricular approaches

3.2.2 Leading in sustainability research

3.2.3 Cultivating sustainability culture

3.2.4 Engaging communities for sustainability

4.0 GOAL

Mainstream sustainability into the core mission areas of USM to secure the future we want for all.

5.0 KEY PRINCIPLES

5.1 Academic

Integrate Sustainability into the academic curriculum at all levels using all delivery modalities, including in-person and digital approaches. These approaches are essential to ensure all necessary sustainability concepts, aspects and issues are introduced and their relevance to the three pillars of Sustainability. These are covered by formal, non-formal and informal teaching.

5.2 Research & Development

Leading in sustainability research, including inter- and trans-disciplinary research; new knowledge creation; promote and incubate advanced innovative thinking; and the ability to translate, disseminate and apply the created knowledge for sustainable development solutions.

5.3 Communities

Promote knowledge and skill transfer programmes through education for sustainable development principles and practices to address pressing community needs and challenges in terms of social, economy, and environment.

5.4 Institutional

Integrate sustainability culture into the core governance system of the university to create an enabling environment within which all the other components operate efficiently.

6.0 POLICY SCOPE

Recognising that the current global growth paradigm continues to make it harder to set human development on a sustainable trajectory, we reaffirm the urgent need for our graduates to be fully literate in the knowledge necessary to chart a sustainable future for them. To align with the 17 SDGs (UN, 2015), we have selected the following major sustainability priorities for focused intervention - collectively known as the 'USM-SDGs' approach:

6.1 Clean Water & Sanitation [SDG6]

Forty per cent shortfall in global freshwater resources by 2030 is a wake-up call for us to rethink the way we manage our water resources. In Malaysia, despite the abundance of water resources due to tropical climate setting, yet Malaysian still suffer from water shortage incidents, access to clean water and proper sanitation (SDG 6). It is time to promote sustainable and integrated water resources management by all the sectors through water quantity and quality monitoring, water availability information sharing and encourage participation of local communities.

We should maximize water reuse across the university, reduce water consumption on campus and integrate of sustainable water management practices throughout the campus by 2030.

6.2 Affordable & Clean Energy [SDG7, SDG9]

The global energy demand is projected to rise nearly 50 percent by 2050; the underprivileged who live without electricity access is expected to exceed 800 million. Access to affordable and clean energy (SDG 7) is indispensable for social and economic welfare. Thus, our priority is to support equitable access to affordable, reliable and sustainable energy. We are also committed to achieving sustainable industry, innovation and infrastructure (SDG 9) in an effort to build a resilient and clean environment by practising modern energy supplies and applying sustainable infrastructure and transportation system. We encourage initiatives in developing and deploying renewable energy, energy-efficient innovations and sustainable industrialisation through teaching, scientific research, university spin-offs and entrepreneurship, consultation, and community outreach programmes.

6.3 Good Health & Well-Being [SDG3]

The world is facing a global health crisis, which includes a wide spectrum of diseases, emerging health issues and health emergencies, as well as poor access to quality essential health services and affordable medicines and vaccines for all. More efforts are needed to address and promote good health and well-being for all (SDG3); reduce death or illnesses from communicable and 'life-style' diseases and substance use disorders, emerging diseases, and health effects of environmental pollution and improve rural medical facilities.

6.4 Zero Hunger [SDG2], No Poverty [SDG1]

World population reaching 10 billion people by 2057 in line with increase additional food demand in the future. Global food demand and supply, water availability, impact of climate change on global resource and food security become challenges

and priority in agriculture. Recognizing the importance of addressing the issues that arise, agriculture needs to revitalise around the world, including Malaysia. In this case, making the transition to sustainable agriculture is the vibrant solution. The sustainable agriculture is evolving with food demand of people, availability of technology, healthy environment, economic profitability, and social equity. Indirectly, sustainable agriculture will promote zero hunger (SDG2), no poverty (SDG1), and responsible consumption and production (SDG12).

We should encourage all staff and students to implement and support the agricultural sector, particularly in relation to food production, distribution, and consumption. We also promote sustainable farming practices that minimize negative environmental impacts, such as soil erosion, water pollution, and greenhouse gas emissions. This includes measures like conservation programs, organic farming support, and promoting agroecological approaches.

We had implemented policies to ensure food security, which involves guaranteeing that all individuals have access to safe, nutritious, and affordable food. This can include initiatives like food assistance programs, school feeding programs, acal food systems.

6.5 Life Below Water [SDG14], Life on Land [SDG15]

Approximately 40% of our ocean and 80% of the world's forests are threatened and destroyed or irreversibly degraded by the impact of human activities, thus causing loss of habitats, biodiversity and the ecosystem services provided by them. Therefore, we are committed to embracing life below water (SDG14) and life on land (SDG 15) directed towards sustainably managing these important ecosystems: marine, coastal and terrestrial.

We should address farming of fish, shellfish, and aquatic plants in controlled environments. They cover aspects such as site selection, environmental impact assessments, water quality management, disease control, feed management, and the use of antibiotics and chemicals. We must ensure responsible aquaculture practices that minimize negative impacts on ecosystems, animal welfare, and public health. We can also promote the conservation of biodiversity, maintain water quality, and preserve the ecological integrity of aquatic ecosystems and involve designating protected areas, implementing habitat restoration projects, and encouraging sustainable land use practices in coastal zones.

Our priorities are to document and assess the value of ecological goods and services supported by these ecosystems, protect endangered species from extinction, sustainably manage agricultural activities from land degradation and desertification of forests cover, conservation, restoration and sustainable use of terrestrial ecosystems associated with the university sustainably manage fisheries activities from overharvesting, preserve our rich biodiversity and reduce the vulnerability of environmentally sensitive areas.

We need to develop frameworks to assess the potential risks associated with introducing alien species. This includes evaluating the likelihood of establishment, spread, and ecological impacts. Measures are put in place to prevent the intentional or accidental introduction of invasive species, such as through regulations on trade, transportation, and importation.

We also need to emphasize the importance of early detection and rapid response to new or emerging alien species. This involves surveillance systems, monitoring networks, and protocols for reporting and assessing potential invasive species.

6.6 Climate Change [SDG13]

Extreme weather events are expected to increase. Warmer temperatures will also worsen drought conditions. Precipitation events are becoming more severe due to climate change – harder rainfall and shifts in rainfall patterns mean an increased likelihood of both flash flooding and drought. Minimising the risk associated with these changes through research is the urgent priority to enhance the resilience of people and communities to address climate change (SDG13). Given the scenario for increased intensity and frequency of climatic extremes, measures for both mitigation and adaptation should be mainstreamed into national development plans. At the same time, research should intensify to predict the impact of climate change and to mitigate risks.

6.7 Production and Consumption [SDG12]

The current world consumption and production patterns are unsustainable. The daily waste produced in Malaysia is more than 38,000 tonnes while the annual global waste reached 2.12 billion tonnes in 2020. In addition, the oil reserve is expected to be depleted by 2060. With most of our natural resources being finite, our social and economic growth will not be sustainable over the long term and we risk permanent damage to our fragile biosphere. Therefore, ensuring responsible consumption and production (SDG12) is the key to environmental preservation and sustainable economic development. We will need to reduce our dependency on non-renewable resources, avoiding the generation of hazardous waste and reducing emissions of pollutants. At the same time, we can promote comprehensive usage of our primary resources (raw materials and energy resources) and innovate secondary resources that are greener and renewable.

USM is committed to sustainable waste management through practices that reduce environmental impact and support resource recovery. The university embraces the concept of turning waste into valuable resources and aims to build a low carbon campus by minimizing the use of plastics and single use items. USM has adopted Malaysia's Roadmap TOwards Zero Single Use Plastics and encourages the use of eco-friendly alternatives among campus vendors. In addition, USM has established a comprehensive hazardous waste disposal policy to ensure that we have clear processes and practices in place to manage hazardous materials responsibly and safely.

We should strive to raise awareness among students, faculty, and staff about the negative impact of plastic on the environment through educational programs and campaigns. Collaboration with stakeholders, including local organizations and businesses, is encouraged to foster joint initiatives and innovative solutions to create a campus environment that prioritizes plastic-conscious practices and serves as a model for other institutions, contributing to a greener and healthier future.

6.8 Population and Poverty [SDG5, SDG8, SDG10 & SDG11]

Despite the world population rising close to 8 billion, almost 10 % of the population still lives in an enormously poor environment and goes to bed on an empty stomach. A large number of them are also unemployed, receive unequal job treatment, lacking access to quality education, and living in cities that are not sustainable environmentally. We encourage initiatives to promote zero hunger (SDG2) and we collaborate in the development of sustainable cities and communities (SDG11). Most importantly, we are committed to further enhancing quality education (SDG 4) for our graduates and communities to literately achieve poverty reduction (SDG1) and gender equality (SDG5), and empower them to earn decent jobs in accelerating economic growth (SDG 8) and reducing inequalities (SDG10) for the betterment of the future population.

6.9 Quality Education [SDG4]

It is the rights of everyone to get educated, irrespective of gender, race, religion, social status, or physical disabilities. Unfortunately, more than 262 million children are not receiving formal schooling, while more than 750 million adults are dropped out. Global challenges could not be seen as an excuse to deny education to these individuals. Access towards education should be widely open, so that no one is left behind due to accessibility issues. Construction of a healthy, safe, harmonious learning climate could not be compromised for future generation that meets all the three pillars of sustainability. Commitment towards quality education (SDG4) is vital by all means and space. Values integration, emotional and spiritual stability are also elements that needed to be highlighted in the quality education.

6.10 Good Governance [SDG16]

Governance of higher learning institutions is often changed and in some cases, red-tapes have been created to suit a particular situation. These whim and fancy governances have been criticized for issues such as poor autonomy, bureaucracy, rigid institutional cultures, nonobjective industry/scholarly driven and less engagement with stakeholders. While the University today faces multifaceted performance pressure and competes for limited institutional resources, the University must be committed and firm in executing good governance, be highly independent and accountable for all the stakeholders in promoting an inclusive society. The University should continue working under a proper control, monitoring and reporting mechanism. This will help to establish a peace, justice, and strong institutions (SDG16).

6.11 Networking for Sustainable Development [SDG17]

Detrimental conflicts and tensions that occur between countries are due to the lack of understanding. To address this pressing issue, it is imperative to develop a peaceful, transparent, and strong collaboration between all level of institutions in Malaysia and other countries to discuss and promote the best practices of all the sustainable development goals. Assisting different sectors of society to develop sustainability policies and strategies through inclusive and collective partnerships for the goals (SDG17) at the global, regional, national, and local levels for a sustainable future is key to the development of a sustainable tomorrow. Education should act as

a conduit to empower sustainability knowledge and awareness to the civil society, notably the younger generation.

7.0 POLICY TARGET

This Policy will effectively be implemented through the following 4 focus areas with detail planning and action to be taken, covering all the 11 scopes of the Policy.

7.1 Teaching (formal, non-formal and informal education)

7.1.1 Strengthen the Knowledge on Sustainability:

a. Increase sustainability topics in diverse but related disciplines, enabling the students to better coordinate and implement sustainability concepts in addressing multi, inter or trans disciplinary challenges.

b. Feature sustainability elements in courses.

c. Develop dynamic curricula and project works contributing to good practices in sustainable development.

d. Foster sustainable courses that promote life-long learning anywhere and anytime by offering a variety of digital courses, which is affordable and high-quality such as massive open online courses (MOOC) and micro-credential courses.

7.1.2 Enhance Skills for Sustainable Development:

a. Encourage staff to be leaders and practitioners of sustainable development.

b. Nurture students with sustainability practices to meet the needs of the job market.

7.1.3 Cultivate Positive Attitudes Toward Sustainability:

a. Promote staff and students' appreciation on sustainability concepts.

b. Nurture entrepreneurs that champion sustainable industry/businesses.

7.1.4 Nurture the Values of Social Accountability and Responsibility on Sustainability:

a. Encourage sustainable development practitioners to possess high ethical standards and a sense of responsibility towards the community.

7.2 Research and Innovation (process, fundamental/basic action/ applied and sustainability science research)

7.2.1 Funding

a. Prioritise internal funding for SDG-related research.

b. Incentivise and acknowledge researchers who have awarded impactful external SDGs-related grant.

7.2.2 Publication

a. Encourage and incentivise the SDGs impactful publication.

7.2.3 Supervision

a. To be a hub for future talents and leaders with relevant skills and inspiration toward sustainable development.

b. Nurturing and empowering future industry and community leaders to sustainable development.

7.2.4 Industrial Impact

a. Leverage on resources from SDGs-related businesses.

b. Establish a One-stop sustainability hub (IP, commercialisation, industrial funding, etc.) to support and provide technologies and services for sustainable development.

c. Develop SDGs-related exchange programmes between university and other sectors, encompassing commercial industry, state and the local governments.

7.2.5 Scholarly Impact

a. Groom leading scholars in trans disciplinary research on SDGs.

b. Facilitate and empower PTJ to become a reputable and referral centre in the SDGs agenda

c. Uplift the university as a leading and referral institution in the SDGs agenda.

7.2.6 Social Impact

a. Translate innovative research into community development and inspiring the bottom billions to transform their socio-economic well- being.

7.3 Institutional Arrangement

7.3.1 Responsible Management

a. Manage with equitable, non-discrimination, and justice way.

b. Maximising full potential of the talents and optimising usage of resources.

c. Prioritise purchase of products from sustainable sources, especially local vendors to minimize carbon footprints.

d. Prioritising bottom billion.

7.3.2 Talent Transformation

a. Train talent in supporting SDG agenda.

b. Nurture leader in SDG agenda.

7.3.3 Financial Resources

a. Managing and optimising financial resources in a sustainable way.

7.3.4 Campus Development

a. Promote zero waste, zero emission, green and renewable energies.

b. Preserve heritage and biodiversity.

7.3.5 University Services

a. Provide health and safety occupational environment.

b. Minimize emission, pollution and wastage.

c. Nurture user responsible and sustainable mind-set.

d. Preserve cultural heritage.

7.3.6 Integrity and Accountability Culture

a. Instill ethical organizational culture Build up working environment that is accountable and sustainable.

7.4 University-Community Engagement (industry, village, NGOs, civil society/non-state actors, business, regulators and government)

7.4.1 Knowledge Transfer

a. Provide leadership and become a role model for communities to cultivate sustainability culture.

b. Provide general education on knowledge, innovation, and solution related to sustainability of the communities.

c. Contribute expert advice to communities on policy review and development related to sustainability.

7.4.2 Skill & Training

a. Provide direct training to local communities especially the indigenous people and local knowledge groups in sustaining their economic diversity.

b. Organise outreach activities to expose and shape the sustainability capacity and lifestyle of the local communities.

7.4.3 Funding

a. Allocate funding for supporting the implementation of sustainability projects in local communities.

b. Engage/Seek financial resources to enhance the funding capacity.

7.4.4 Collaborative Programmes

a. To have collaborative discussion with stakeholders related to issues and best practices of sustainability agenda through forums or conference.

b. To work with stakeholders to develop and support programmes that encourage and promote sustainability agenda.

8.0 DELIVERY OF THE POLICY

To facilitate the transformation, the following initiatives should be taken by the university:

8.1 The university should have a University Sustainability Council (USC) to monitor, evaluate, and strategize the transformation. The Centre for Global Sustainability Studies (CGSS) acts as the secretariat for USC to mainstream sustainability into the entire fabric and rubric of the university.

8.2 The Deputy Vice-Chancellor (Industry and Community Network) should appoint a Sustainability Officer at each Centre of Responsibility. Their tasks include:

8.2.1 Responsible for appointing a small Sustainability Committee at the respective Centre of Responsibility.

8.2.2 Plan and determine sustainability activities that can be carried out at the respective Centre of Responsibility.

8.2.3 Administer and monitor sustainability activities at the respective Centre of Responsibility.

8.2.4 Attend sustainability related trainings offered by the university.

8.2.5 Maximise the achievement of USM through expertise, planning, ideas, and implementation of activities related to sustainability.

8.2.6 Plan strategies with regard to the collection and preparation of sustainability data.

8.2.7 Prepare annual report comprising sustainability activities for respective Centre of Responsibility.

8.2.8 The appointment is for the period of two years.

8.3 The following sustainability related policies should be promoted:

8.3.1 Trees Policy

8.3.2 Tobacco Free Policy

8.3.3 *Dasar dan Etika Penyelidikan Universiti Sains Malaysia*

8.3.4 *Dasar E-Pembelajaran USM*

8.3.5 *Dasar Gangguan Seksual USM*

8.3.6 *Dasar Kebajikan Pelajar*

8.3.7 Occupational Safety & Health Policy

8.3.8 *Dasar Keusahawanan KPM*

8.3.9 *Dasar Orang Kurang Upaya (OKU) Universiti Sains Malaysia*

8.3.10 *Dasar Pembangunan Keusahawanan*

8.3.11 *Dasar Pengurusan Dan Kawalan Keselamatan dan Kesihatan Pekerjaan (KKP) USM*

8.3.12 *Dasar Penyediaan Minuman Tanpa atau Kurang Gula Semasa Perbincangan Formal*

8.3.13 *Dasar Tenaga Universiti Sains Malaysia*

9.0 MONITORING AND EVALUATION

CGSS is responsible to monitor the reports submitted by Sustainability Officer from all Centre of Responsibility once a year. Other sustainability supplementary materials (USM Governance Guidelines for Sustainability Best Practices, United Nations documents, THE-GIR indicators etc.) will provide general guidance for the implementation of the policy presented here which may require revision and reorientation of existing approaches, gap filling, and leapfrogging. CGSS will inform on the achievement of sustainability development to the University Sustainability Council (USC) for evaluation purposes.

10.0 THE ROLE AND RESPONSIBILITY OF USC, CGSS AND CENTRE OF RESPONSIBILITY

All sustainability initiatives within the teaching, research, community engagement, and institutional arrangement activities of USM will be under the purview of the University Sustainability Council (USC). USC meeting is conducted at least three times a year, chaired by the USM Vice-Chancellor. USC will process, monitor, and supervise the implementation of the activities, programmes, and projects under these policy guidelines. The policy will be reviewed as necessary to ensure it remains relevant and effective based on local and global (glocal) sustainability aspirations.

CGSS acts as the secretariat for USC. CGSS coordinates and compiles all reporting, presentation, and publication materials related to sustainability. CGSS is also initiating and heading university wide project and events that promoting sustainability transformation. Each Centre of Responsibility is required to play its role in mainstreaming sustainability across USM. Each Centre of Responsibility is expected to:

a. conduct internal meeting two times a year to discuss on sustainability programmes/activities at its level.
b. organise sustainability programmes/activities for students, staff, and members of the public at its level.
c. take part in USM Sustainability Month/Week at USM level and provide reports on sustainability programmes/activities to CGSS.

11.0 REPORTING

The Sustainability Officer at each Centre of Responsibility should compile and prepare an annual report on all sustainability-related activities and submit to CGSS. An annual sustainability report is to be prepared by CGSS for the Deputy Vice-Chancellor of Industry and Community Network to develop a comprehensive USM Sustainability Report.

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