



USM POLICY ON SUSTAINABILITY 2014

INTRODUCTION

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 integrating social, economic and environmental aspects into our core activities such as teaching, research, community engagement and institutional arrangement.

VISION

Transforming
Higher
Education
for a
Sustainable
Tomorrow

MISSION

Make tomorrow
better than today' by:

- Innovative curricular approaches
- Pioneering inter & trans-disciplinary research
- Empowerment of talent, and by
- Enabling the bottom billion to transform their socio-economic well-being.

GOAL

Mainstream sustainability¹
into the core
mission areas of
USM to secure
the future we
want for all.

¹ Translated into action via the *sejahtera* concept and the University in a Garden concept

VALUES AND PRINCIPLES

THE VALUES OF USM ARE:

QUALITY

EQUITY

ACCESSIBILITY

AVAILABILITY

AFFORDABILITY

APPROPRIATENESS

These values, together with the following principles, will guide all sustainability (used interchangeably with sustainable development, SD) implementation initiatives of the university, in particular the four specific domain areas of focus (vide infra).

- 1 Societal well-being, poverty eradication and the integrity of bio-physical systems will be key to our sustainability priorities.
- 2 Equity and justice in their broadest sense - both temporal and special - will be upheld to promote healthy and productive life in harmony with nature.
- 3 People and communities will be treated ethically and with respect.
- 4 Transparency and accountability will guide all sustainability activities, internal and external.
- 5 As far as possible, new sustainability programs will be built on existing initiatives.
- 6 Information and communication technologies will be used effectively for the promotion of sustainability.
- 7 Partnership and collaboration will be key to sustainability implementation.

THE CONTEXT AND THE FOCUS

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) 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. 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. Aligned with the global thinking (WSSD 2002 and Rio+20 2012), we have selected water, energy, health, agriculture and biodiversity (WEHAB) as the five major sectors and climate change-disaster risk management, production-consumption and population-poverty as the three cross-sectors that form the major sustainability priorities for focussed intervention - collectively called the 'WEHAB+3' approach. Within this context, the principled approach should be to:

- Adopt sustainable development as a major guiding principle for the overall operations, including teaching, research, community engagements and institutional arrangements;
- Educate our students with the right blend of knowledge on trans-disciplinary and inter-sectoral integration, skills, perspectives and value systems suitable for adaptive management, critical reflection and participatory approaches needed for sustainability;
- Ensure that research performed addresses environmental, social and economic problems and that efforts are made to translate research findings into policy and public knowledge;
- Create an appropriate institutional culture by 'walking the talk' through campus sustainability efforts;
- Establish alliance and partnership with relevant stakeholders in the public and private sectors to promote sustainable development;
- Nurture and educate young people to be leaders and agents of change for a sustainable future.

IMPORTANT ISSUES UNDER WEHAB + 3

Recognising that 'sustainable development' is the best option for growth that meets the needs of the present while safeguarding Earth's life-supporting system on which the welfare of current and future generations depends, the member countries of the United Nations have collectively negotiated and agreed on a set of thematic areas and cross-sectoral issues most relevant for sustainable living, the key targets of which have been captured by USM under the WEHAB+3 approach as follows:



WATER

Provide access to at least one billion people who lack clean drinking water and two billion people who lack proper sanitation globally. The health of river ecosystems & coastal waters, storm water and monsoon related floods and the need to establish an integrated water resource management system remain as major challenges nationally for Malaysia.



ENERGY

Provide access to more than two billion people who lack modern energy services; promote renewable energy; reduce overconsumption; ratify and implement the Kyoto Protocol's current and future commitments to address climate change. Using the five-fuel policy of Malaysia, enhance energy efficiency and the contribution of renewable energy at the national level through cost reduction and policy support.



HEALTH

Address the effects of toxic and hazardous materials; reduce air pollution, which kills three million people each year, and reduce the incidence of malaria, HIV/AIDS and new & emerging diseases, which are linked to polluted water, lifestyle and poor sanitation. In Malaysia while maintaining the dramatic improvements in health in general, address non-communicable & 'life-style' diseases, emerging diseases, health effects of environmental pollution (e.g. forest fires, sanitation) and lack of adequate rural medical facilities.



AGRICULTURE

Work to reverse land degradation, which affects about two-thirds of the world's agricultural lands. Recognising the integral links between agriculture, food security and economic growth, revitalise agriculture as an engine of growth in Malaysia; promote agribiotechnology through research and innovation and value addition, marketing and distribution of agroproducts.



BIODIVERSITY AND ECOSYSTEM MANAGEMENT

Reverse the processes that have destroyed almost half of the world's tropical rainforests and mangroves, and are threatening 70 per cent of the world's coral reefs and decimating the world's fisheries. While Malaysia could be proud of its biodiversity and forest cover, there is an urgent need to document and assess the value of ecological goods and services, protect endangered species, agricultural and fisheries biodiversity and reduce the vulnerability of environmentally sensitive areas.

In addition to these critical areas, there are three major cross-sectoral fields which have such strong feedbacks on the WEHAB sectors that any treatment excluding them is incomplete and almost futile.



CLIMATE CHANGE AND DISASTER RISK MANAGEMENT

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 increased likelihood of both flash flooding and drought. Minimising the risk associated with these changes is the urgent priority to enhance the resilience of people and communities to address climate change. Modelling results estimate that Malaysia will continue to get warmer with substantial increase in rainfall over the North-eastern coastal region and a decrease in monthly rainfall in the West coast of Peninsular Malaysia. Given the scenario for increased intensity and frequency of climatic extremes, measures for both mitigation and adaptation should be mainstreamed into national development plans.



PRODUCTION AND CONSUMPTION

Analysis of overall resource use shows that current consumption patterns are unsustainable and, if left unchecked, will lead to an increasingly degraded environment. This is because current patterns of production and consumption have resulted from a narrow historical focus of exploiting resources for human needs and to maximise economic utility, rather than enabling sustainable consumption patterns. If increasing the efficiency of our energy, water and materials systems is not sufficient to reduce absolute pressures on the environment, then reducing overall consumption will be necessary. While Malaysia's industrial and economic growth is impressive, there is urgent need to improve science and front-end technology skills, labour market stability, public private partnership and consumer awareness and education.



POPULATION AND POVERTY

A global population, currently at 7 billion and rising, seem to escalate the economic and ecological challenges we face today. The fact that this population growth is highly uneven across the world, the largest growth being in the developing countries which are already vulnerable to a host of other development challenges, does not seem to help the situation. This scenario widens the gap between the rich and the poor globally and within individual countries, calling for both equity and equality to be promoted to ensure the rights of minorities, the underprivileged, and those with special needs are cared for & their interests protected. Malaysia's measures that reduced poverty rate from 17% in 1990 to only 3.9% in 2008 need to be accelerated to alleviate relative poverty and hardship of those at the bottom of the population pyramid, through risk reduction and resilience building efforts.

Against this background, USM's sustainability policies and procedures have been contextualised to meet the priorities of national and regional needs.

OUR ABILITY AND DUTY TO ACT

Based on the considerable achievements of USM in laying a strong sustainability foundation during Phase I of 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 is poised to enter an ecosphere of APEX Phase II 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 towards that common goal. The following sustainability policies are provided to facilitate this transformation.

POLICY STATEMENT AND DESCRIPTION

USM is committed to mainstream sustainable development principles in the core areas of the university to produce graduates and staff with first class skills and thinking, research par 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.

Domain

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

Policy

Integrate sustainability into the academic curriculum at all levels using all modalities of delivery to ensure that necessary knowledge, skills, perspectives, value systems and issues are introduced and their relevance to the three pillars of sustainability emphasized fully through formal, non formal and informal teaching.

This should help

1

Enhance the understanding of students and staff on WEHAB + 3.

2

Formally train all USM graduates on sustainability using WEHAB+3.

3

Mainstream Sustainability into existing formal courses using WEHAB+3.

4

Introduce new courses in Sustainability Gap Areas.

Domain

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

Policy

Champion sustainability research activities that are inter-disciplinary and promote advanced innovative thinking, new knowledge creation, and the ability to use and disseminate knowledge to find solutions to pressing sustainability challenges based on WEHAB+3 priorities.

This should help

1

Enhance understanding of research staff on the theory and practices of 'sustainability science'.

2

Promote use-Inspired and solution oriented research aimed at generating 'best practices' worth up-scaling.

3

Result in improved quality of people's life, healthy and productive ecosystems and innovative societal transformations.

Domain

University-community engagement (industry, village, NGOs, civil society/non-state actors, business and policy communities)

Policy

Promote knowledge/skill transfer programs using education for sustainable development principles and practices to address community needs and challenges.

This should help

1

Establish collaborative, integrated and meaningful scholarly partnership with community and other stakeholders.

2

Support the identity of indigenous people and promote their knowledge, culture, cultural industries, cultural diversity, intellectual property rights and effective participation at all levels.

3

Target industry, low income community, policy groups, NGOs & Government agencies.

4

Promote partnerships and networking to enhance awareness and capacity of communities at all levels to improve access to health services, education, security, good governance, gender equity & equality and human rights.

Domain

Institutional arrangement (procurement: goods and services, utilities, infrastructure, transport, waste, and soft structures involving data, software and networks)

Policy

Integrate sustainability into the core governance system of the university to create an innovative enabling environment within which the other components (teaching, research and community engagement) operate efficiently.

This should include

1

Energy

- Reduce consumption
- Increase the proportion of renewable energy mix

2

Water

- Increase rainwater harvesting
- Reduce wastage

3

Building and movable asset

- Comply with Indoor Air Quality (IAQ) standards
- Comply with Green Building Index (GBI)
- Landscaping to be resource efficient and ecofriendly to promote biodiversity
- Retrofit and maintain buildings and assets therein
- Preserve heritage buildings

4

Transportation

- Promote sustainable travel by reducing carbon emission from work related travel and University fleet
- Increase public transport facilities

This should include

5

Waste

- Increase the proportion of waste that is recycled and minimize the amount sent to landfills
- Divert e-waste from landfill to reuse and recycling facilities
- Dispose of biomedical and hazardous waste safely

6

Procurement

- Purchase products and services that reduce the USM's environmental impact, and minimize direct or indirect pollution to land, air and water.
- Purchase energy efficient and environmentally friendly electrical equipment
- Purchase cleaning agents that meet sustainability compliance
- Use recycled paper as much as possible and recycle waste paper
- Increase the share of organic or local food on campus
- Overall, follow sustainable procurement policies/ guidelines

7

Biodiversity

- Preserve and enhance campus biodiversity

8

Emission

- Reduce campus emission of GHG and other pollutants to meet emission targets

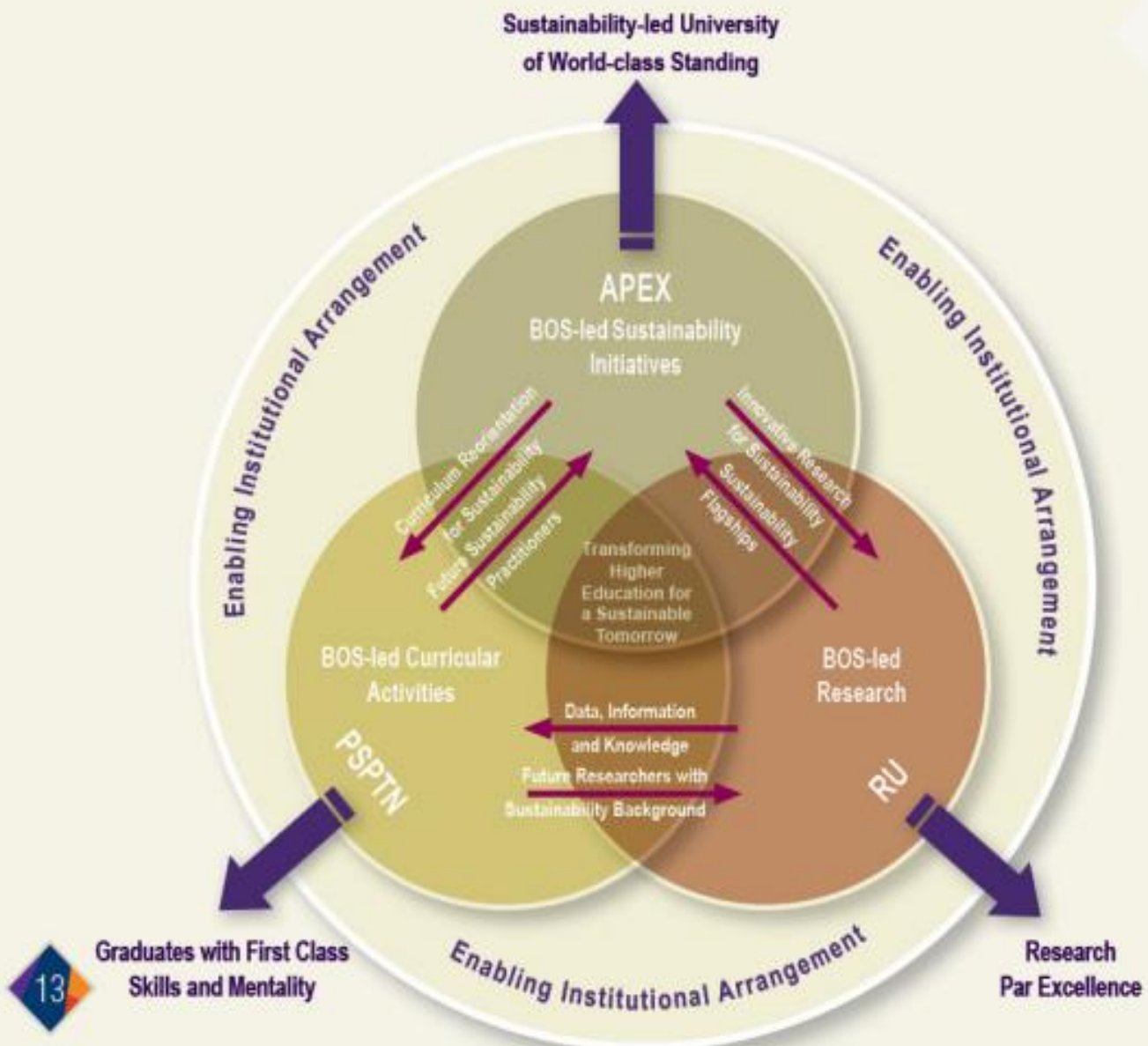
9

Occupational Health and Safety

- Observe strict compliance to OHS regulations
- Take measures to minimise non-communicable diseases

USM TO DELIVER AS ONE

This policy has to be seen within the tripartite responsibility of USM under its PSPTN, RU and APEX obligations and the synergies that result when these operate interactively; as envisioned in the interlocking Venn diagram below. The centre where the three circles overlap represents the higher educational transformation that is achieved through outstanding teaching under PSPTN, state of the art research under RU and holistic sustainability within the APEX focus. The two arrows that connect any two circles show the mutual reinforcement that each sector provides the others. The arrows move in both directions, indicating the cyclical nature of the interactions, whose quality of output improves with each iteration. The overall outcome to the larger beneficiaries is shown by the purple arrows that point outwards. They represent graduates with first class skills and thinking, excellent research products and services, and best practices in sustainability that will make USM a university of world-class standing. Collectively, we ought to create an enabling environment within which the envisioned transformation could ensue.



MONITORING AND EVALUATION

The sustainability assessment methodology (SAM) developed by CGSS and other relevant sustainability indicators will be used to gauge the level of implementation of the policy on a project by project or unit basis. The sustainability indicator Framework and Worksheets presented in the USM-APX Sustainability Roadmap and other supplementary materials will provide general guidance for the implementation of the policies presented here which may require revision or reorientation of existing approaches, gap filling and leapfrogging.

THE ROLE AND RESPONSIBILITY OF THE UNIVERSITY SUSTAINABILITY COUNCIL

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 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.

REPORTING

Need based progress reports will be prepared as they relate to internal or external guidelines. Schools, Centres, Institute and other relevant divisions will be expected to provide the information required for such reporting.



PROFESSOR DATO' DR. OMAR OSMAN

Vice-Chancellor

Universiti Sains Malaysia

25 March, 2014





Centre for Global Sustainability Studies (CGSS)
5th Floor, Hamzah Sendut Library
Universiti Sains Malaysia
11800 USM, Penang
Malaysia

Tel: +604-6532461

Fax: +604-6535273

E-mail: cgss@usm.my

Web: <http://cgss.usm.my>