GOVERNANCE GUIDELINES
FOR
SUSTAINABILITY BEST PRACTICES
UNIVERSITI SAINS MALAYSIA (USM) CAMPUS

2016

Centre for Global Sustainability Studies (CGSS),
Universiti Sains Malaysia (USM)

GOVERNANCE GUIDELINES

FOR

SUSTAINABILITY BEST PRACTICES

UNIVERSITI SAINS MALAYSIA (USM)

Dewan Utama Pelajar, Universiti Sains Malaysia, Penang

18-19 July 2016

Edited by:

Kamarulazizi Ibrahim, Ahmad Firdaus Ahmad Shabudin,
Siti Fairuz Mohd Radzi, Sharifah Nurlaili Farhana Syed Azhar,
Mahfuzah Othman, Ummul Syakirah Mustafa,
Abdul Syafiq Ramlan, Mohammad Shafiq Abdul Aziz

Published by

Centre for Global Sustainability Studies (CGSS)
Level 5, Hamzah Sendut Library
Universiti Sains Malaysia
11800 Universiti Sains Malaysia
Penang
Website: http://cgss.usm.my
Email: cgss@usm.my

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1.0 INTRODUCTION

USM policy includes a whole system approach which involves four major domains of focus; teaching, research, community engagement and institutional arrangement. USM has come up with an initiative to bring upon the institutional arrangement domain to action by organizing **Governance Guidelines for Sustainability Best Practices Lab: Universiti Sains Malaysia (USM)**.

Governance Guidelines for Sustainability Best Practices: Universiti Sains Malaysia (USM) is intended to go hand in hand with the **USM Sustainability Policy**, which offers direction on implementing sustainable best practices across the management and operational system of Universiti Sains Malaysia campus. It is intended to assist communities of the campus such as staff, students, planning and building committees, vendors and project design teams to understand and implement the USM sustainability policy.

2.0 GUIDELINE

The guideline offers an outline for Universiti Sains Malaysia to implement its sustainable best practices across all appropriate aspects in campus's management and operational system. This guideline seeks to achieve the following objectives:

(i) To ensure that campus development projects and activities reflect the sustainability objectives of the USM Sustainability Policy,

(ii) To provide information on sustainable practices and approaches that can be integrated in the planning and developing of future facilities in USM Campuses,

(iii) To assist campus planning and building committees, campus staffs and students, and vendors in making decisions to ensure the sustainable campus development.

At Universiti Sains Malaysia, we are integrating the principle of sustainability and sustainable development into the core management and operational system of the university to create an innovative sustainable best practice within which the campus's institutional arrangement operates efficiently;

1. ENERGY

Goal: Reduce total energy consumption, vitalise energy efficiency and initiate renewable energy sources in order to minimise the campus greenhouse gas emissions.

	Best Practices:	**Cost**
1.	Mandatory installation of energy saving air-conditioner for new buildings/upgrading/ replacement per specifications established by technical committee	Medium / High
2.	Setting air-condition temperature at 24 degree Celsius at Operation Office/ Sales Gallery	Zero
3.	Energy saving signage/label/sticker in workplace area standardised by CETREE for all electrical equipment (e.g., air-con, lift)	Low
4.	Mandatory installation of energy saving lighting for new buildings/upgrading/replacement per specifications established by technical committee	Medium / High
5.	Creating procurement frame work towards accepting energy performance contracting (EPC) for energy saving lighting in existing buildings	Medium / High
6.	Holistic review of lighting needs in USM towards de-lamping, reorientation of lighting switches	Low / Zero
7.	Regenerative lift	High
8.	High efficiency motor for existing lift system	Medium / High
9.	Motion sensors (e.g. lighting, escalators, etc.)	low/medium
10.	Energy efficient glazing for new buildings (e.g. low-e glass, double glazing units, etc.)	Low / Medium
11.	Shading device for existing building (e.g.	Medium

	window blinds, screening, louvers, deep roof overhang, etc.)	
12.	Maximize natural day lighting in new building design (e.g. Light shelves)	Low / Medium
13.	Energy saving technologies for air conditioning (centralize district cooling)	High
14.	Reengineering domestic water system design to minimise energy use (during off peak hours)	Medium
15.	Shielding: Development is designed with sufficient green buffers to shield from hot sun minimizing building heating and cooling requirements with vegetation.	Medium
16.	Application of low energy building design concepts for new buildings	Low
17.	Set timer or instruction to switch off light / air conditioner during lunch or after office hour	Low
18.	Incorporating Building Automation System (BAS) for existing and new buildings	Medium
19.	NGV for USM transportation fleet	Medium
20.	Electric vehicle for USM transportation fleet	High
21.	Purchasing all Electrical equipment in accordance with Energy Commission energy star standards	low/medium
22.	Delegating the responsibility of paying electricity to each PTJ (need to install relevant sub-meters to each PTJs/Buildings)	Medium / High
23.	Moderating the behaviour of electricity users by implementing energy saving campaign	Zero / Low
24.	Applying passive design in new building (e.g. natural ventilation & natural lighting)	Low
25.	Installation of renewable energy (biomass) 200kw power plant in engineering Campus	High
26.	Installation of renewable energy (biofuel)	High
27.	Solar Photovoltaic (BIPV) for all feasible existing roof in USM under FIT scheme	High

28.	Solar hot water heaters where needed and applicable	Medium
29.	Biodiesel / Biofuel for USM transportation fleet	Medium
30.	Off-grid biodiesel generator for certain facilities	Medium
31.	Utilization of existing biogas reactor in Desasiswa Aman Damai	Medium / High
32.	Installation of Solar Panel for road side lighting	Medium

2. WATER

Goal: Reduce overall water consumption and explore alternative resources, treatment, recycling and reuse of water and wastewater in order to minimise campus water footprint.

	Best Practices:	**Cost**
1.	Rainwater harvesting system at every building (for effective harvesting, need students to study size of tank with respect to rainfall event, roof catchment area etc)	Low
2.	Storm water harvesting for irrigation	High
3.	Rehabilitation of existing USM retention pond (with assistance from JPS) - community project (students involvement)	Medium
4.	Research on ground water sub surface exploration	Medium
5.	Basin, tap and mixer -control stop-cork	Zero
6.	Flushing system need to be changed whole cistern (students)	High
7.	Shower tap, mixers and showerheads – control stop-cork	Zero
8.	Kolah (tank) ablution at mosque - community work (students)	Low
9.	Reuse/ recycle 'air wuduk' using low cost technology)	Medium
10.	Building cleaning practices (using bucket e.g mop)	Zero
11.	Awareness programme among the users	Low
12.	Committee on water usage in campus (NGO, students, academic and admin staffs)	Low
13.	Usage of waste / reject water from RO machine at Pusat Sejahtera (Haemodialisis) need to study on water quality for possible usage (FYP project)	Low

14.	Cooling tower - possible water reduction through research by Mechanical Engineering students.	Low
15.	New building - green technology (FYP project to study minumum usage of water & to develop guideline)	Low
16.	Water audit committee (pembangunan etc)	Low
17.	Audit for water usage (baseline, research, students, desa etc)	Medium
18.	New design for piping system (usage of proper pipe material)	Medium

3. BUILDING AND MOVABLE ASSET

Goal: Improve the existing and new buildings and movable asset in order to minimise the physical impact of surrounding natural landscape in campus.

	Best Practice	Cost
1.	Elimination or relocation of the source of the air contaminants, and the appropriate location of the air supply or exhaust openings of the mechanical ventilation system;	High / Medium
2.	Control of exposure to environmental tobacco	Zero
3.	Enforcement to tobacco users.	Zero
4.	Substitution of the building material or chemicals with those that have a lower emission rate or emitting a less hazardous contaminant	High
5.	Repair or replace the material where microbial growth has taken place on a material	Medium
6.	Green cleaning practices.	Medium
7.	Periodic measurement of IAQ level (CO2, VOC, etc)	Medium
8.	Prevent Sick building syndrom	medium / low
9.	Preventing measures from design stage of a building	low
10.	To comply MS1525 guidline Building Energy Index (BEI)	Medium
11.	Retrofitting of existing or abandoned interior space	Medium
12.	Encourage the selection of a building close	low

	to basic community amenities.	
13.	Encourage the practice of sustainable interior space design.	medium / low
14.	Encourage the provision of indoor greenscape within the interior space design	low
15.	Waste collection facilities (CHUTE - cerobong)	high
16.	Lumber sourced from sustainably farmed or harvested trees.	high
17.	Reuse on-site structures, hardscape, and landscape amenities	low
18.	Sustainable pavement materials	high
19.	Usage of existing natural resources for landscape & infra e.g. rocks, boulders etc.	low
20.	Reuse construction waste / debris.	low / zero
21.	Good landscape maintenance and management practices	low
22.	Disable friendly design	high
23.	Preventive maintenance schedul	medium
24.	Cost effective operating system.	low
25.	Awareness (Sayangi Harta USM) / Penalty system	low
26.	Movable asset - set life span according to SPAD standard (15 years)	high
27.	Multipurpose use of university vehicles	low
28.	Maintenance or enhancement of heritage features	high
29.	Preservation of native vegetation/ existing natural features and resources	low
30.	Conservation and maintenance work	medium
31.	Policy to identify heritage building in campus	low

4. TRANSPORTATION

Goal: Reduce the impact of automobiles and provide and encourage the alternative transportation in order to reduce greenhouse gas emissions and improve air quality.

	Best Practices:	**Cost**
1.	Improve park and ride depot with parking facilities and public transport	Low
2.	Revise shuttle bus system for all 3 campuses – in terms of demand, cost, frequency and suitability of mini bus according to route and time	Medium
3.	Bike sharing system - plan, develop & maintenance	Medium
4.	Improve pedestrian accessibility to encourage students to walk – provide shaded walkway and universal design for walkway	Medium
5.	Eco-van / bus (charging from green sources)/– etc. biogas/ biodiesel/ NGV/ solar cell/ hybrid	High
6.	Encourage the usage of hybrid vehicles	Low
7.	Existing – now have 10 buses running per day (contract will end by year 2018) – to buy / renew contract - e-bus and OKU friendly	High
8.	Existing – now have 4 eco-vans (contract has expired) – to purchase new vehicles	High
9.	Free car-hours or free car-day for staff and students but vendors are allowed to enter using a special pass or no car for certain areas or certain time zone.	Low
10.	Campaign for cycling and walking	Low
11.	Provide cycling path	Medium
12.	Increase number of access points for pedestrian, using access card	Medium
13.	Develop and use similar apps such as the Uber	Medium

	apps for shuttle bus and eco-van (to determine the location with high demand)	
14.	Multi-storey car park with daily charge – at least 4 storeys (recommend beside DTSP)	High
15.	Fully utilise university's car and driver	Low
16.	Allocate special car parks for visitors	Low
17.	Replace old vehicles (more than 10 years) with more eco-friendly transport to save maintenance cost	High
18.	OKU friendly transport	Medium
19.	One-way street for certain roads in the university to improve traffic flow	Low
20.	E-bike for security guard to patrol within the campus	Medium
21.	Increase the frequency of shuttle bus between Engineering Campus and Main Campus	Medium
22.	Reallocate spaces to reduce movements – lecture hall within walking distance from hostels	Medium/High
23.	Encourage carpooling between staff and staff and staff and students	Low
24.	Bus stand – provide timetable and real time information for bus	Medium
25.	Only final year students who are active in extra-curriculum are allow to request for stickers to bring their own transportation into campus	Low
26.	Strict enforcement from security guards (no sticker no entry)	Low
27.	Students are not allowed to park at staff area (fine + clamp)	Low
28.	Parking violation - (disciplinary action/ university court/ legal office)	Low
29.	Hologram on stickers for security purpose	Medium
30.	Awareness campaign on sustainable transport	Low

4. WASTE

Goal: Promote the sustainable disposal of products that indirectly or directly contribute to the environmental impacts.

	Best Practices:	**Cost**
1.	Lumber sourced from sustainably farmed or harvested trees. (e.g. FSC products, etc.)	
2.	Mulching of palm oil biomass	
3.	Reuse on-site structures, hardscape, and landscape amenities	
4.	Conduct a life cycle assessment of materials.	
5.	Sustainable pavement materials	
6.	Usage of existing natural resources for landscape & infra e.g. rocks, boulders etc.	
7.	Used formwork system.	
8.	Use internal sources (garden trimming tree, phytomass)	Low
9.	Convert cafeteria waste and garden waste into compost	Low
10.	Landscaping waste to be converted to biomass energy sources	Medium
11.	Low maintenance design, tree and grass only	Low
12.	Reuse construction waste / debris.	
13.	Encourage reduction in the quantity of excavated	

	materials removed or transported into the district by optimising the use of cut and fill material removed during earthworks/ land preparation works	
14.	Conduct 3R program with employees	
15.	Encourage double sided printing	
16.	Waste education program with employees	
17.	Signage for awareness creation	
18.	Conduct spring cleaning program	
19.	Recommission USM mini biogas reactor for power generation (Desasiswa Aman)	Rm100 000
20.	Sustainable way of disposing unused furniture / movable asset	Low
21.	Create environmental recycling centre	Low
22.	Awareness campaign (priority primary school)	Low
23.	Centralize waste management system	Low
24.	Waste water recycling system	Low
25.	Waste segregation	Low
26.	Centralize waste management operator	Low
27.	No plastic bottle / bags on campus policy (bring your own container)	Low
28.	*Kantin Musuh Plastik* (rewards & certification) competition	Low

29.	Green Fund (recyclable material)	Low
30.	*Makan Sampai Habis* campaign	Low
31.	Database for waste management expenditure	Low
32.	Printing both side	Low
33.	SOP - material collection from recycling bin	Low
34.	Signage for awareness creation	Low
35.	Conduct spring cleaning program	Low
36.	Waste education program with employees	Low
37.	Screening for future staff and students having environmental awareness	Low
38.	Storage area (air-conditioner, menthol, fluorescence lamp)	
39.	E-waste collection centre	Low
40.	Centralize e-waste coordination system	Low
41.	Extraction of valuable material	High
42.	ESH Performance Monthly reporting	
43.	Proper labelling and inventory list	
44.	Photos and videos of proper scheduled waste storage at site	
45.	List of schedule waste at strategic spot	Low
46.	Improve the disposal method	Low

47.	Periodical biomedical and hazardous waste management	Low
48.	*Penyerahan Sijil Pelupusan Aset ke pejabat bendahari (KEW.PA-19)* - to be canceled	Low

5. PROCUREMENT

Goal:
Purchase product and services that reduce the campus's environmental impact and minimise direct or indirect pollution to land, air and water and; encourage efficient use of resources in order to minimise the potential additional economic cost due to inefficient management

	Best Practice	Cost
1.	Identify the vendor / supplier in line with the needs of the university (practice green / sustainablity)	
2.	Vendor / supplier must be registered with USM	
3.	Need to get a list of vendors / suppliers who have been blacklisted and low performance by the Ministry of Finance	
4.	Vendors are responsible for the waste chemicals from supply purchases	
5.	Determining the required product specifications in line with the aspirations / university regulations	
6.	Enforcing purchase of supplies from recycled materials eg paper	
7.	Preference to vendors / suppliers who have ECO LABEL (example : My Green Label , SIRIM ECO LABEL , Green Tags , EU Ecolabel , Energy Star , Green Label Singapore , New Zealand Environmental Choice , ISO 14000 label , recycle label)	

8.	Evaluation of vendor / supplier previous performance (track record)	
9.	Vendor / supplier evaluation by users after the work is carried out	
10.	Achievement announcements of purchase supplies with eco label and procurement progress can be seen on the dashboard by the user	
11.	Vendors / suppliers have to comply with policy / security regulations (OSH)	
12.	Treasury Department has a list of recommended vendors in order to get a reasonable price and best quality	
13.	Centralized purchasing by the University	
14.	Vendor selection should give priority to local vendors (50km)	
15.	Selection of vendors who have after sales service	
16.	Identify the vendor / contractor using the materials comply with the standard practice of green environment (GGP) during the assessment panel work	
17.	Achievement announcements of purchase supplies with eco label and procurement progress can be seen on the dashboard by the user	
18.	Contractor must be registered with the CIDB	
19.	Pricing list from JKR/USM	

20.	Food handlers should follow the rules of the Ministry of Health and the Food Act 1983	
21.	Food operators responsible for the disposal of waste food	
22.	Achievement announcements of purchase supplies with eco label and procurement progress can be seen on the dashboard by the user	

7. BIODIVERSITY

Goal: Preserve and enhance the campus biodiversity and sustainable landscape in response to mitigation of environmental issues i.e. climate change, air pollution, water pollution, pesticide toxicity, invasive species etc.

	Best Practices:	Cost
1.	EIA conducted (not applicable unless for development 50 hectars or more and hilly areas)	NA
2.	Compliance to EIA requirement (not applicable unless for development 50 hectars or more and hilly areas)	NA
3.	Comprehensive plan over and above the EIA requirement cited	NA
4.	Biodiversity Inventory (continuous regular monitoring, more flora and fauna, inventory for Taman Rekreasi)	Low
5.	Inventory of unrecorded areas eg: Durian Valley, Taman Rekreasi, Tasik Harapan, Padang Golf,PPSFarmasi, Campus stream, Campus Engineering	Low
6.	Preservation of heritage listed trees	Medium
7.	Planting rare, endemics, native, fruit, durian variety species	Medium
8.	Eco-hub (add more species eg: traditional medicines, pharmacy)	Medium
9.	Gazettement of hotspot areas	Zero
10.	Focus on hotspot areas (Durian Valley, Taman Rekreasi, etc)	Low
11.	Arboretum (enhance Taman Rekreasi's)	High
12.	Fogging using environmental chemicals (ULV) - not advisable	High
13.	Having fish in ponds	Low
14.	Increase community engagement	NA

15.	Adoption of suitable management plan or mechanism. (Does USM has a physical management plan?)	???
16.	Preservation and enhancement of native vegetation/ existing natural features and resources	Medium
17.	The use of sustainable materials in design	High
18.	Revitalization of River & Retention Ponds	Medium
19.	Rain Garden as a part of irrigation system	Medium
20.	Keep good views open and screen out those that are undesirable	Zero
21.	Reducing sound from a busy road may require creating a large berm or dense plantings to separate traffic noise from campus space	Medium
22.	Ecological and Environmental engineering approaches	High
23.	Reduction of stormwater run-off through the use of bio-swales, rain gardens and green roofs and walls	High
24.	Permeable paving materials to reduce storm water run-off and allow rain water to infiltrate into the ground and replenish groundwater rather than run into surface water	High
25.	Well-placed shrub or to provide necessary screening	Low
26.	To plant fruits trees that can attract birds and butterflies	Low
27.	Create recreational and green lung spaces for all campuses	Medium
28.	Create roof top and vertical edible organic gardens at vacant spaces	Low
29.	Good planning, management, maintainance, monitoring practices	Low

8. EMISSION

Goal: Reduce the campus emission of Green House Gases (GHG) and other pollutant to meet global emission target in response to climate change

	Best Practice	Cost
1.	Identify and document sources of emission. Due diligence exercise on documentation. Identify and analyse what types of emissions that are harmful within the campus.	Medium
2.	Plan to conduct emission test within the radius of 2.5 KM outside campus area.	Medium
3.	Explore the use of renewable energy to reduce emission. Example: LED lighting, solar cell.	High
4.	Conduct Carbon Footprint (CFP) briefing with Consultant/ Vendor/ Contractor.	Medium
5.	Convert all transportation fleet services to biodiesel. Explore the use of Catalytic converter and electric motorbikes for security department staffs.	Medium
6.	Relevant stakeholders would have to submit CFP data to CGSS. CGSS to submit CFP data to Quality Management System on time.	Low
7.	Relevant stakeholders submit to CGSS. Implementation of SDP Carbon Reduction Roadmap.	Low

8.	Achieve >1% reduction in carbon intensity after 5 years of implementation based on existing sustainability policy and benchmark.	Medium
9.	Stricter enforcement on outsiders which uses USM as an alternative route. Full implementation of the auto gate should be enforced. The auto gate should be repositioned if necessary.	High
10.	Introduce park and ride facilities.	Low/Medium
11.	Bicycle services should complement the park and ride facility.	High
12.	More eco-vans should be introduced. Alternative transportation should be encouraged. e.g use of roller blade. Covered footpath for pedestrian. Segmentation of lecture halls according to schools to reduce traffic usage by students and lecturers. Stricter enforcement to ensure students do not use vehicles on campus during peak hours. Introduce specific zone hour for the use of transport by students.	High
13.	Establish baseline data for carbon footprints in campus. Recommend appropriate clothing for Malaysian climate to minimise the use of air conditioner.	Medium
14.	Increase the number of access gate for walking pedestrian (access of these gates through the use of matric card).	High

15.	Encourage the use of online lecture (using Webex or similar technologies).	Low/Medium
16.	Ensure compliance of lab emissions to current standards (chemicals). Centralize laboratory access.	Medium/High
17.	Introduce the use of smart building application rapidly (energy efficient building).	High
18.	Identify campus green spot. E.g : introduce friendly pedestrian walk (restrict to pedestrian only) e.g cafeteria.	Low
19.	Consider the use of EIA (Environmental Impact Assessment) and EMP (Environmental Management Plan) based on needs for future development within campus.	High
20.	Evidence of implementation.	Low
21.	Recognition or awards for environmental management.	Medium
22.	Encourage tree planting as green buffer zone.	Low
23.	Introduce parking charges to students to reduce vehicle use in the campus.	Zero
24.	Impose transportation fees for the use of shuttle bus for the international students.	Zero

9. OCCUPATIONAL HEALTH AND SAFETY

Goal: Strengthen the occupational health and safety among campus communities in order to provide insight into a campus' practices in ensuring and maintaining zero accident.

	Best Practices	**Cost**
1.	University awareness programme for student, staff, tenant, & visitor (including contractor)	Medium
2.	PTJ's induction programme base on HIRARC (student & staff)	Medium
3.	Documented Standard Operating Procedures (SOP)	Low
4.	University OHS Audit, investigation, corrective and preventive action	Low
5.	PTJ's OHS Audit investigation, corrective and preventive action	Medium
6.	Policy, Procedure & Facilities for Special Needs group - (Children and OKU)	High
7.	Online OHS knowledge information centre	Low
8.	Annual OHS pledge for student (semester renewal) & staff (LPP)	Low
9.	Policy on Penalty for OHS Non Compliance	Low
10.	Inclusion of OHS requirement in the university procurement	Low
11.	PTJ's emergency preparedness and response	Medium
12.	Psychosocial Aspect of Crime Prevention	Medium
13.	OHS training programme for PTJ management	Low

14.	OHS incident scoreboard	Medium
15.	OHS TOT programme on HIRARC	Medium
16.	Establish PTJ and OSH competent person network	Low
17.	Establish OHS procurement coordination at UNI & PTJ	Low
18.	Review the policy and procedure on audio visual equipment at the lecture hall	Low
19.	Review the policy and procedure on lecture hall furniture on ergonomic aspect	Low
20.	Review the policy and procedure on the safety of building materials	Low
21.	Legal, Policy, Objective, Target & Programme - JKKPU	Low
22.	Health surveillance (noise, radiation, chemical, animal)	Medium
23.	Indoor air quality	Medium
24.	Control of pest and stray animals	Low

3.0 CAMPUS SUSTAINABILITY INDICATOR

The University strives to be a sustainability-led university in driving forward the local, regional and global sustainability agenda and continuously benchmarks its progress in mainstreaming sustainable best practices in campus via Campus Sustainability Indicator.

Implementation Scoring Guideline

The implementation score is based on the implementation made in each PTJ based on nine main domain- energy, asset, procurement, water, waste, transportation, biodiversity, emission and occupational health and safety (OHS).

Each domain is divided in different sets of sub-domain, elements and best practises.

The following implementation score guideline is used to assess each best practices implemented in one's PTJ. Yes=1 indicates that the PTJ have implemented the best practised given in the template (please refer Appendix X). No= 0 indicated that the best practise have not yet been implemented in one's PTJ.

	Implementation	
	Yes	No
Score	1	0

The table below is an overall assessment guideline used to determine the level of each main domain in each PTJ after taking into consideration of the total implementation of each best practice. The overall assessment guideline is divided into bronze, Silver Gold and Platinum.

Overall Assesment Guideline

	Bronze	Silver	Gold	Platinum
Scoring	≤ 3 best practices	4-6 best practices	7-9 best practices	≥ 10 best practices

4.0 MONITORING SUSTAINABILITY GOVERNANCE

Monitoring of governance sustainability best practices within USM Campuses will consists of the integration of USM's Sustainability Council, Centre for Global Sustainability Studies, *Sekretariat Kampus Sejahtera* (Campus Well-being Secretariat) and Regional Centre of Expertise (RCE) on Education for Sustainable Development (ESD) and Assistant Registrar (observer team).

a) UNIVERSITY SUSTAINABILITY COUNCIL (USC)

The University has established the University Sustainability Council (USC) to support the sustainability agenda across the institution through the provision of advice and guidance. The Council is chaired by the Vice-Chancellor and a membership that includes the four Deputy Vice-Chancellor, heads, directors and deans of sections responsible for sustainability mainstreaming at the institutional level. All sustainability initiatives of the institution will be under the purview of USC.

b) CENTRE FOR GLOBAL SUSTAINABILITY STUDIES (CGSS)

Centre for Global Sustainability Studies (CGSS) is a research centre designed to work with all relevant sections of university, local, regional and international sustainability organisations, government, private sectors, civil society and NGOs to promote sustainable development. The vision of CGSS is to become an advanced studies centre to propel USM as a renowned sustainability-led university based on fusion of the sciences and humanities to strive global sustainability.

c) SEKRETARIAT KAMPUS SEJAHTERA

Sekretariat Kampus Sejahtera (SKS) (Campus Well-being Secretariat) is another platform to instil volunteerism in students and support sustainability related activities on campus. Headed by relatively young enthusiasts at the Vice Chancellors office, SKS is now the major vehicle through which all campus sustainability activities are carried out. . There are six clusters of SKS, namely energy efficiency, water conservation, biodiversity, healthy lifestyles, urban agriculture and waste management. The secretariat will give guidance to the USM student community for their commitment and responsibility toward campus sustainability through self-initiatives, proactive teamwork and volunteerism.

d) REGIONAL CENTRE OF EXPERTISE (RCE) ON EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD)

RCE Penang is not a physical centre or building, but a network of individuals, organisations and groups who are committed to building a more sustainable future through education and learning. Our network includes partners from the voluntary, public, education and business sectors, who work together to develop and implement innovative ESD projects and programmes in Penang. Hosted by the

University Sains Malaysia, RCE Penang is part of a growing global network of over a hundred RCE's. The Global RCE Secretariat is based at the United Nations University Institute for the Advancement of Sustainability (UNU IAS) in Tokyo, Japan. Local knowledge, expertise and best practices are shared globally through this large network and are able to be adapted and applied successfully in other regions.

e) <u>ASSISTANT REGISTRAR (OBSERVER TEAM) INFO FROM KAMPUS SEJAHTERA</u>

1. **Energy:**
   Miss Sheilawanis Binti Abdul Karim
2. **Water:**
   Miss Syahnaz Riza Binti Sukor
3. **Building & Movable Asset:**
   Mr. Ahmad Wafi Bin Sahedan
4. **Transportation :**
   Mr. Mohamad Kasyfi Bin Mohamad Taufik
5. **Waste:**
   Mr. Muhammad Syukri Saadon
6. **Procurement:**
   Mr. Ahmad Hazran Bin Yusof Hamdani
7. **Biodiversity:**
   Miss Juwita Sari Binti Abd Karim
8. **Emission:**
   Mdm. Bazilah Mohamad Zaki
9. **Occupational Health and Safety:**
   Mr. Mohd Zulkarnain Bin Mohamad Tajulariffin

PREPARATION COMMITTEE

Advisor : Prof.Dato' Dr. Omar Osman
Chairman : Prof. Dr. Kamarulazizi Ibrahim
Deputy-Chairman : Dr. Suzyrman Sibly
Secretary : Miss Mahfuzah Othman
Assistant Secretary : Mr. Mohammad Shafiq Abdul Aziz
Mr. Ahmad Firdaus Ahmad Shabudin
Treasurer : Mr. Mohd Sabri Mustaffa

Documentation
Dr. Suzyrman Sibly
Dr. Ng Theam Foo
Dr. Noor Adelyna Muhammad Akib
Dr. Mohd Sayuti Hassan
Mr. Abdul Syafiq Ramlan

Technical
Mdm. Marlinah Muslim
Miss Sharifah Nurlaili Farhana Syed Azhar
Mdm. Mu'azzah Ismail
Miss Siti Fairuz Mohd Radzi
Mr. Muniandy A/L Thoplan
Miss. Fadzlida Fadzil

Members of World Cafe Discussion

Energy

Resource Person: Assoc. Prof. Dr. Mohd Wira Bin Mohd Shafiei
Rapporteur: Miss Sheilawanis Binti Abdul Karim
Facilitator: Dr. Ng Theam Foo
Participants: Mr. Mohd Salmi Bin Ismail
Mr. Mohd Azman Bin Ahmad Bistamam
Mr. Suhaimi Abu Bakar
Mr. Hasan Basri Bin Abd Karim
Mr. Shahrizal Nazri
Mr. Wan Mazlan Wan Ab. Rahman
Dr. Faizal Bin Baharum
Dr. Khatijah Aisha Binti Yaacob

Water

Resource Person: Prof. Ir. Dr. Mohd Nordin Bin Adlan
Rapporteur: Miss Syahnaz Riza Binti Sukor
Facilitator: Mr. Ahmad Firdaus Ahmad Shabudin
Participants: Mr. Fahmi Reza Abd Patah
Mr. Mohd Ridzuan Yahya
Mr. Nasrullah Mohamed Farouk
Mr. Subli Yop
Sr. Dr. Atasya Osmadi
Mr. Mohd Noor Naina Mohamed
Dr. Muhammad Izzuddin Syakir Ishak

Building & Movable Asset

Resource Person: Assoc. Prof. Dr Mohd Rodzi Ismail
Rapporteur: Miss Ummul Syakirah Mustafa
Facilitator: Dr. Mohd Sayuti Hassan
Participants: Mr. Mokhrizan Ahmad Jeni
Mr. Mohd Hizam Mohd Hanif
Mdm. Nor Asniza Jamaludin
Assoc. Prof. Dr. Nazirah Zainul Abidin
Mdm. Hairunnisa Mehat

Transportation

Resource Person: Assoc. Prof. Ir. Dr. Leong Lee Vien
Rapporteur: Miss Siti Maheran Che Seman
Facilitator: Miss Sharifah Nurlaili Farhana Syed Azhar
Participants: Dr. Sharifah Rohayah Binti Sheikh Dawood
Dr. Nur Sabahiah Binti Abdul Sukor
Mr. Mansor Bin Mohd Khir
Dr. Ahmad Hilmy Bin Abdul Hamid
Mr. Roslan Bin Talib
Mr. Abdul Rafiq Bin Azizan
Mr. Ismail @ Kamalshani Bin Osman
Mdm. Nur Akmar Binti Idris
Mr. Idrus Bin Rapie
Mr. Muhamad Asri Bin Awang Kechik

Waste

Resource Person: Prof. Dr. Norli Binti Ismail
Rapporteur: Miss Alia Saadi A. Samad
Facilitator: Mdm. Marlinah Muslim
Participants: Assoc. Prof. Dr. Mahamad Hakimi Bin Ibrahim
Assoc. Prof. Dr. Mohd Suffian Bin Yusoff
Assoc. Prof. Ir. Nik Fuaad Nik Abllah
Mr. Mohd Zain Bin Dollah
Dr. Japareng Bin Lalung
Dr. Siti Haslina Binti Md Harizan

Procurement

Resource Person: Dr. Mohd Anuar Bin Arshad
Rapporteur: Mr. Ahmad Hazran Bin Yusof Hamdani
Facilitator: Miss Mahfuzah Othman
Participants: Mdm. Nur Yazmin Binti Muhammed
Mdm. Nurul Hayati Binti Azme
Mr. Mohd Badaruddin Bin Yusof
Mdm. Iza Rahayu Abd Rahim
Mdm. Zanita Zakaria

Biodiversity

Resource Person: Dr. Nurul Salmi Binti Abdul Latip
Rapporteur: Miss Juwita Sari Binti Abd Karim
Facilitator: Dr. Noor Adelyna Mohammed Akib
Participants: Dr. Asyraf Bin Mansor
Mr. Baharuddin Bin Sulaiman
Dr. Nadine Brigitte Ruppert
Dr. Nur Faeza Binti Abu Kassim
Dr. Rahmad Bin Zakaria
Dr. Nur Asshifa Binti Md Noh
Mr. Nor A'zam Bin Shuib
Mr. Mohd Saifull Bin Yunus
Mr. Adha Bin Haji Abdul Ghani
Assoc. Prof. Dr. Fuziah Binti Ibrahim
Dr. Shahriza Bin Shahrudin

Emission

Resource Person: Dr. Noor Faizah Fitri Binti Md Yusof
Rapporteur: Miss Wan Mazliena Aliana Wan Sabri
Facilitator: Dr. Suzyrman Sibly
Participants: Prof. Dr. Abdul Latif Bin Ahmad
Prof. Dr. Zainal Alimuddin Bin Zainal Alauddin
Assoc. Prof. Dr. Leo Choe Peng
Dr. Irvan Dahlan
Prof. Dr. Rahmat Bin Awang
Mdm. Zaiyana Binti Mohamed Hussain
Mr. Ezal Ezham Bin Azami

Occupational Health and Safety

Resource Person: Dr. Jahangir Bin Kamaldin
Rapporteur: Mr. Mohd Zulkarnain Bin Mohamad Tajulariffin Zaki
Facilitator: Miss Fatin Nabilla Ariffin
Participants: Dr. Lilis Surienty Binti Abd Talib
Mr. Mohammad Zaip Bin Ahmad
Mdm. Fazlyana Binti Khosny
Mr. Mohd Hafizul Bin Mohd Arop
Mr. Asif Bin Abdul Rahim
Assoc. Prof. Dr. Sundramoorthy A/L M.Pathmanathan
Dr. Normala Binti Abdul Wahid
Dr. Ananda Raj A/L Sanmarkan
Dr. Yeong Pei Ming
Mdm. Azima Binti Hassan
Dr. Muhammad Azrul Zabidi

ACKNOWLEDGEMENT

Universiti Sains Malaysia would like to express our appreciation and gratitude to those involved either directly or indirectly in the realisation of this guideline consequent from the discussion and brainstorming in the laboratory of 'Governance Guidelines for Sustainability Best Practices USM' Roadmap'

PICTURE PAINTS A THOUSAND WORDS


1
KEBIJAKSANAAN
(Wisdom)
Arif, bijak dan berhemah dalam tindakan & kehidupan
2
KEBENARAN
(Truth)
Berlaku adil, mempertahankan yang benar & menolak yang bathil
3
QALBU
Q-qalbun salim (pureness of the heart)
Kesucian hati
A - amanah (trustworthy)
Jujur, ikhlas, berdedikasi & bertanggungjawab
L - lisan (communication skills)
Kemahiran interpersonal
B - bersih (clean & transparent)
Telus dalam segala tindakan & urusan
U - ukhuwah (togetherness & inclusiveness)
Kebersamaan, keterbukaan, kesejahteraan
4
KEMANUSIAAN
(Humanity)
Prihatin & berperikemanusiaan
5
KEINDAHAN
(Beauty)
Indah, menyenangkan & membawa kesejahteraan
Rukun Nilai USM

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

Tel: +604-653 2461
Fax: +604-653 5273
Email: cgss@usm.my
Website: http://cgss.usm.my

CENTRE FOR GLOBAL SUSTAINABILITY STUDIES