Sustainability-led Institution: Case of Universiti Sains Malaysia, Penang

Teaching Note

CASE SUMMARY

Universiti Sains Malaysia (USM), located in Penang Island, Malaysia was established in 1969. Situated in one of the most industrialised and urbanised regions of Malaysia, USM aspires to be a sustainability-led university and has gone from business-as-usual scenario to transforming higher education for sustainable tomorrow. Transformation must start from within and thus, the campus activities must reflect sustainable development concept such as sustainable consumption, sustainable lifestyle, and sustainable transportation. This learning case is designed to encourage discussion and improve understanding among the administrative departments and campus community, on the challenges of implementing sustainable consumption in an institution. Even though this case focuses on higher education institution, the challenges and learning experiences are comparable to other institutions and organisations.

LEARNING OBJECTIVES

- To improve stakeholders' knowledge and capacity on sustainable consumption
- To identify and rank resources used for operational activities which have high material/resources consumption
- To determine framework for sustainable consumption of the institution

TIPS FOR FACILITATORS

The working sessions are meant as a guide to explore the operational activities of an institution from the perspective of the stakeholders for innovative solutions to sustainable consumption. Therefore, the discussions can be directed to focus on activities that consume common resources in order to facilitate discussions among participants from different institutions and background.

Working Session 2 can be used to identify capacity building needs for different activities to encourage sustainable culture in an institution

FACILITATION PROCESS

Working Session 1: Stakeholders and activities

1. Based on the unit selected by the group, participants will identify the relevant stakeholders (refer to Table 3 and Appendix 1) and list the stakeholders in Worksheet. If this exercise is conducted in a large group, small groups of 3-4 persons can work on different divisions for Steps 1-4 and combine the results for Step 5.

2. Assuming that the group members are stakeholders of the selected unit, time should be allocated (suggestion: 5 minutes) to create general understanding and context of the unit's functions [(teaching/ research/ community engagement/ administration/ others), activities, and the stakeholders' roles and responsibilities for sustainable consumption.

3. Using Worksheet 1 and going around the table, list the specifics/details of activities that each stakeholder (group member) thinks are consuming a lot of materials/resources. Limit only one activity for each stakeholder in each round. It is important to describe specific activity rather than just a general act. This exercise can be repeated for a number of rounds in a specific time limit. (suggestion: 5 minutes)

4. Working as a group, the stakeholders (group members) need to identify what and how much materials/resources are used for each activity on a daily/ weekly/ monthly basis. The volume can be in kg, cartons, bottles, monetary value etc. The stakeholders (group members) should discuss or ask questions regarding the activities listed for clarity (suggestion: 10 minutes)

5. Ranking of the activities based on high resource consumption and high potential/ need for reduction. Selection of activity can be via voting or consensus. For voting, each group member is given 10 points which he/she can give to one or more activities that he/ she deemed important. The total points of each activity will decide the ranking from highest to lowest.

6. Learning points:
   a. identification of stakeholders relevant to sustainable consumption initiatives in a unit/ division;
   b. stakeholders discussion assist identification of activities that have high resource consumption in the different activities of the unit;
   c. prioritizing the identified activities based on consumption and efficiency of the activities and informed decision making require knowledge on resources; and management issues, technical issues and other values

Working Session 2: **Sustainable consumption framework**

1. This session requires participants to work in groups, assuming that the group members are the committee for making recommendations on the sustainable consumption framework to be implemented by the unit. The group can elect a person to chair and lead the discussion and another to be the scribe.

2. Based on the ranking of high resource consumption and high potential for reduction (Work Sheet 1), select at least one detail/specific activities for each type of activity (teaching, research, community engagement and administration) relevant to the unit. List these selected details/ specific activities in the first column of Work Sheet 2.

3. For each selected detail/ specific activity listed in column one, determine the sustainable consumption goal which is aligned with USM's Vision and Mission Statement (Box 2) and USM's model for sustainability mainstreaming (Figure 1).

4. Determine and list specific consumption target or outcome(s) to be achieved by the unit in terms of quality (skill, knowledge, etc.) and quantity. The target or outcome should be measureable and achievable within a specific period.

5. Propose and list the intervention strategies and actions. The actions proposed should address knowledge, values and skills (management and/or technical) required for achieving the target (outcome).

6. Indicators for the activities can be determined by asking "Have the activity outcomes been achieved?" and "Have the outputs been delivered?" Indicators should be specific, measurable in terms of quality, quantity and time, attainable and reliable.

7. Identifying responsibility and sources of information is important. The group need to determine how the information will be collected, when and by whom, and also how it will be reported.

Learning point:

a. multiple stakeholders must be involved in the planning and designing of the sustainable consumption framework;
b. management goals and strategies for sustainable consumption must align with the institution's vision and mission;
c. stakeholder focus group discussion should encourage and support innovative sustainable consumption solutions;
d. indicators selected for monitoring of activities should be specific, measurable, attainable, reliable, and occur in a given time period; and
e. determining responsibilities for execution, monitoring, and reporting of sustainable consumption actions at the unit level.

Worksheet 1: Stakeholders and Activities

Name of the Unit/Division: School of Humanities

List of stakeholders:

- Administrative Officers
- Research Officers
- Science Officers
- Technicians
- Laboratory Assistant
- Clerks
- General workers
- Drivers
- Lecturers
- Postgraduate Students
- Undergraduate Students

Activities related to resource consumption		Determining high resource consumption	
Type of activity	Specifics/Details of activity	Volume of resources used	Ranking high resource consumption
1. Teaching	a. Printed lecture notes	3 reams of A4 paper/ student/ semester	5
	b. Printed teaching materials	4 reams of A4 paper/ students/ semester	6
	c. Examination Answers Booklet	2 booklet/ student/ course	1
		USD2000/ month	4

	d. 16 hours of air-conditioned lecture halls e. 10 hours of air-conditioned tutorial rooms	electricity bill USD3000/ month electricity bill	4
2. Research	a. Printed questionnaires for socio economic surveys b. Chemicals for laboratory assays c. Hazardous waste disposal d. Printed progress reports e. Site visits and field work travel		
3. Administration	a. Printed copies of minutes of meeting b. Notices of seminars/ workshops/ conferences		
4. Community Engagement			

Worksheet 2: Sustainable Consumption Framework

Activity	SCP Goal (Impact)	Target (Outcome)	Intervention (strategies and actions) (Output)	Indicator	Responsibility and Sources
Selected Operational activities (high material/ resource consumption)	Unit sustainable consumption's goal.	Specific consumption outcome(s) to be achieved by the activity in terms of quality, quantity, skill and knowledge.	Actions required in terms of knowledge, values, skills (management and technical)	"Have the activity outcomes been achieved?" measured in terms of quality, quantity and time "Have the outputs been delivered?" measured in terms of quality, quantity and time	How the information will be collected, when and by whom, and how it will be reported

Activity	SCP Goal (Impact)	Target (Outcome)	Intervention (strategies and actions) (Output)	Indicator	Responsibility and Sources
Printed teaching materials	Promote e-learning for sharing of learning and teaching materials	Introduce targeted training and awareness building for academics	Conduct training courses for academic staff	100% academics trained on e-learning	List of academics attended training at end of semester. Data collection by Administrative Officer. Data from Training Department
		E-learning portal aligned with latest teaching innovations	Upgrade e-learning portal with relevant teaching requirements (technical)	Upgrade every 6 months	
			Conduct scheduled hands-on training courses on latest teaching innovations.	3 courses conducted per semester	

Activity	SCP Goal (Impact)	Target (Outcome)	Intervention (strategies and actions) (Output)	Indicator	Responsibility and Sources
Air-conditioned lecture halls	Sustainable energy consumption	Reduce energy consumption Cost savings	Enforce temperature policy for all air conditioners Change old and predated AC for newer models with proper temperature control	100% compliance with 24 C ac setting 50% change to new model by end of year 1 100% change to new model by end of year 2	Data from Administrative Officer Budget allocated and spent on changing AC. Data from the Development Office.