Universiti Sains Malaysia’s Involvement in Sustainability and Sustainability Science

Dr Suzyrman Sibly
Centre for Global Sustainability Studies
Universiti Sains Malaysia
Economy

Social

Environmental

The Reality

Source: IUCN 2006
“Money never made a man happy yet, nor will it. There is nothing in its nature to produce happiness. The more a man has, the more he wants. Instead of filling a vacuum, it makes one.”

-Benjamin Franklin-
Early Initiatives

• Kampus Sejahtera / Healthy Campus Programme
  – Emerged in 2000 from the realization that students’ ability to learn depends on their health and quality of life. The indigenous word sejahtera cuts across spiritual, social, physical, mental and environmental dimensions.

• Regional Centre for Expertise (RCE) for ESD
  – regional networks developed for the promotion of ESD which addresses local sustainable development challenges through research and capacity development
RCE Penang Projects

• Student-led “White Coffin” campaign
  – on-going initiative builds awareness regarding the use of polystyrene-based food containers long term use of which is environmentally unsustainable and may cause cancer

• Sustainable Penang Initiative
  – works closely with other local organisations on issues such as urban development, heritage conservation and sustainable living

• “Wormi Compost” Research Project
  – Community based research project
  – utilizes waste from rice paddies, cow dung and other biodegradable village waste to produce quality compost
  – sold or used for organic farming,
  – resulting in increased income generation
USM Scenario Planning

• The need to address national aspirations for holistic and people focused development that would be environmentally sustainable and socially inclusive
• To stay abreast of the changing demands of the communities it serves
• To remain relevant in the era of globalization
1. The A’ la Carte University (Market – Student-led)
2. The Invisible University (Market – Tech-led)
3. The Corporate University (Commerce-led)
4. The State University (State-led)
5. The University in A Garden (Scholar-led)
6. The Declining / Collapsing University
The APEX Programme

- A fast-track development programme to facilitate selected university to raise its level of excellence
- Introduced in 2008 by the Ministry of Higher Education Malaysia
- Rigorous application process
- All top universities in Malaysia applied
- Awarded to USM
USM APEX Vision:

Transforming Higher Education for a Sustainable Tomorrow
Implementation

• Sustainability Training for Staff
  – Compulsory for all new staff since 2011
  – 2 hour module

• Sustainability Training for Undergraduates
  – WSU 101: Sustainability: Issues, Challenges and Prospects
  – Elective course offered in 2011
  – Started off with 127 students undergraduate students from variety of disciplines
  – This semester, 482 students enrolled
MSDP at USM

• A collaboration of 28 or more universities around the globe
• Global Secretariat is in Columbia University New York
• Promotes training for sustainability practitioners having disciplinary depth but lacking interdisciplinary breadth and hands-on skills required to be effective practitioners
• Offers courses in the disciplines of Natural Sciences, Social Sciences, Management and Health Sciences
• Other Postgraduate Sustainability programmes
  – Master in Sustainable Cities and Communities
  – MBA in Sustainable Development
  – Master of Communication (Science and Environmental Journalism)
  – M.Sc. in Environmental Science
  – Master of Science Environmental Engineering
  – Master in Sustainability (research)
  – PhD in Sustainability (research)
USM Sustainability Council

- Chaired by Vice Chancellor

- Membership includes all four Deputy Vice-Chancellors, Heads, Directors and Deans of sections

- All sustainability initiatives of USM are under the purview of this council
USM Policy on Sustainability 2014

1. Teaching (formal, non-formal, and informal education)
   - Policy: Integrate sustainability into academic curriculum at all levels using all modalities of delivery. This is to ensure that necessary knowledge, skills, perspectives, value systems and issues are introduced and their relevance to the three pillars of sustainability is emphasized.

2. Research and Innovation (process, fundamental basic, action/applied, and sustainability science research)
   - Policy: Champion sustainability research activities that are trans-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.

3. University-community engagement (Industry, village, NGOs, Civil Society/non-state actors, business and policy communities)
   - Policy: Promote knowledge/skill transfer programmes using ESD principles and practices to address community needs and challenges.

4. Institutional arrangements (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.
Knowledge Transfer Programme

• Scientific knowledge and skills from public universities are transferred to partner industries and communities to improve industry performance as well as community well-being.

• Provides feedback to the universities involved through its graduate interns so that the knowledge as well as the knowledge transfer process can be continually improved.
Final Remarks

• Sustainability Science is the knowledge obtained from scientific observation and experimentation, which promotes the well-being of the present and future society
• ESD plays a central role to the promotion of sustainability science
• Sustainability Science is mostly about but not limited to use-inspired research
• Exposing undergraduates early to collaborative sustainability projects across disciplines helps in sustainability science promotion (if they ever decide to become scientists)
• The successful promotion of sustainability science requires an enabling institutional arrangement
Thank You