



UNIVERSITI SAINS MALAYSIA

USM

APEX

CGSS  
CENTRE FOR GLOBAL SUSTAINABILITY STUDIES



# SUSTAINABILITY REPORT

[In Numbers]

**2017**

*“Transforming Higher Education for a Sustainable Tomorrow”*



**Prepared by:**

**Marlinah Muslim**

**Mohd Abdul Muin Md Akil**

**Normaliza Abdul Manaf, PhD**

**Sharifah Nurlaili Farhana Syed Azhar**

**Siti Fairuz Mohd Radzi**

**Siti Izaidah Azmi**

**Layout and Design:**

**Siti Fairuz Mohd Radzi**

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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](mailto:cgss@usm.my)





DEWAN TUANKU SYED PUTRA

I AM USM



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# BACKGROUND OF USM

Established as the second university in the country in 1969, Universiti Sains Malaysia (USM) was first known as Universiti Pulau Pinang. In 1971, USM moved from its temporary premises at the Malayan Teachers' Training College, Bukit Gelugor to the present 416.6 hectare site at Minden, approximately 9.7 km from Georgetown.

USM offers courses ranging from Natural Sciences, Applied Sciences, Medical and Health Sciences, Pharmaceutical Sciences to Building Science and Technology, Social Sciences,

Humanities, and Education. These are available at undergraduate and postgraduate levels to approximately 30,000 students at its 17 Academic Schools on the main campus in the island of Penang; 6 Schools at the Engineering Campus in Nibong Tebal (approximately 50km from the main campus); and 3 at the Health Campus in Kubang Kerian, Kelantan (approximately 300km from the main campus).

USM also has 17 dedicated research centres for a wide range of specialisations which include archaeology, medicine and dentistry, molecular medicine, science and technology, Islamic development and management studies, policy research and international studies, and sustainability. It also provides consultancy, testing, and advisory services to the industry under the ambit of USAINS Holdings Sdn Bhd, the University's commercial arm.

Since the beginning, USM has adopted the School system rather than the traditional Faculty system to ensure that its students are multi-disciplined from their exposure to other areas of study by other Schools. It also encourages students to be active in extra-curricular activities given the myriad of clubs and societies available.

As a Research Intensive University recognised by the Ministry of Higher Education Malaysia (MOHE) in 2007, USM offers educational and research opportunities to students and staff. In 2008, USM also became the first university in the country to be selected by the Malaysian government to participate in the Accelerated Programme for Excellence (APEX), a fast-track programme that helps tertiary institutions achieve world-class status.







## **Vision**

“Transforming Higher Education for a Sustainable Tomorrow”

## **Mission**

USM is a pioneering, transdisciplinary research intensive university that empowers future talents and enables the bottom billions to transform their socio-economic well-being.

## **Value**

Quality, Equality, Availability, Accessibility, Affordability, Appropriateness

## **Thrust**

Knowledge, The Future, Uniqueness, Sustainability, Humanity, Universality, Change, Sacrifice, Wellness

## **Goals**

To be a university world-renowned for sustainability and to be a sustainability-led university.

## **Strategies**

USM aims to achieve its vision through the following strategies:

- 1) Integrated education
- 2) Knowledge, Skills, Perspectives, and Values for Sustainability
- 3) Institutional Accountability
- 4) Enterprise and Partnership
- 5) Skills-mix
- 6) Financing
- 7) Societal Interaction
- 8) New Markets
- 9) A Global Outlooks
- 10) Excellence





## USM AT A GLANCE

**23,570** regular students  
(full time & part time)

**5,481** online students  
(full time & part time)

**9,870** academic &  
administrative staff

**40%** total area on campus  
covered in forest







## USM TOWARDS SUSTAINABILITY

USM has started to embrace education for sustainable development (ESD) and “University as a Living Lab” approach since the year 2000 through the concept of Kampus Sejahtera (Healthy Campus) and University in a Garden. USM aims at promoting sustainability among the community within and outside the campus through education and research activities. In order to achieve APEX vision, USM has taken its initiative to establish a centre which would be able to help USM to mainstream sustainability across all levels within USM community. Established in 2013, the Centre for Global Sustainability Studies would act as a conduit to help USM in the mainstreaming of sustainability within the university. CGSS is designed to work with all relevant sections of the university, regional, and international sustainability organisations, national and regional governments, the private sector, civil society groups and NGOs to promote sustainable development, paying particular attention to the disempowered bottom billion.





# USM SUSTAINABILITY ACHIEVEMENTS

## ENERGY


**20 to 40%** 

Energy efficient appliances usage replacing conventional appliances

**<30%** 


of the total building area

Smart Building Implementation

**2** 


sources (Biomass & Solar Power)

Renewable energy produce inside campus


**43,102,569** 

Kwh

Electricity usage per year

**<20%** 

Ratio of renewable energy produce/production towards total energy usage per year

**60** 

Total carbon footprint (CO2 emission in metric tons)





LED Lamp replacing conventional lamps

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Building with Natural Daylight

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Solar Parking Lot (2.0 Kwh)

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CETREE Green Bus  
(Vegetable Oil Based  
Genset – 8 Kwh)

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# USM SUSTAINABILITY ACHIEVEMENTS

## WASTE



**25 to 50%**  
Recycling program for university waste

Toxic waste is  
**Inventoried & Handled**



Organic waste treatment is  
**Partly Composted & Dumped**



Sewerage disposal is  
**Centralized before Disposal**







Field Trip to Biogas Farm at Nibong Tebal, Penang



Household E-Waste Collection Day





# USM SUSTAINABILITY ACHIEVEMENTS

## WATER

**25 to 50%**

Water efficient appliances installed



**Recycled water**



is used for garden sprinkler system

**Rain Harvesting System**



is implemented for water conservation

**Lake & Pond System**



is implemented for water conservation





Rain Harvesting System at School of Humanities, USM



Lake or Pond at USM



Water Efficient Appliances



# USM SUSTAINABILITY ACHIEVEMENTS

## TRANSPORTATION

### Bus service



is available around the campus

### Pedestrian way



is available for pedestrian's safety

10% to 30% decrease



use of the parking area on campus

### Clamping System



is implemented to reduce the number of vehicle entering the campus





Shuttle service at USM



Pedestrian ways at USM



# USM SUSTAINABILITY ACHIEVEMENTS

## EDUCATION

# 353



courses related to environment & sustainability offered

# USD 3,858,560

Average research funds dedicated to environmental & sustainability research (3 years)



# 255



scholarly publications on environment & sustainability published

# 25



student organizations related to environment & sustainability

4 QUALITY EDUCATION







Building Resilience to Climate Change Risk & Vulnerability to Meet Water Security Challenges Workshop



WSU101 (Sustainability: Issues, Challenges and Prospects) Exhibition



Executive Course on Achieving SDGs Towards 2030





**Centre for Global Sustainability Studies (CGSS)**

**Level 5, Hamzah Sendut Library,**

**11800 Universiti Sains Malaysia,**

**Penang, Malaysia.**

**Tel : +604 653 4885/2461 | Fax: +604 653 5273**

**[cgss@usm.my](mailto:cgss@usm.my) | [cgss.usm.my](http://cgss.usm.my)**