



Keynote 3: Open Science Policy, Recognition & Incentives

24th September 2025
Universiti Malaysia Sabah, Malaysia

Professor Dr Wan Hashim Wan Ibrahim
Chief Digital Officer
Universiti Malaysia Sarawak

OUR VISION

A Leading Global University for a Sustainable Future

OUR MISSION

To enhance the social and economic impacts on the global community through the pursuit of excellence in teaching, research, and strategic engagement





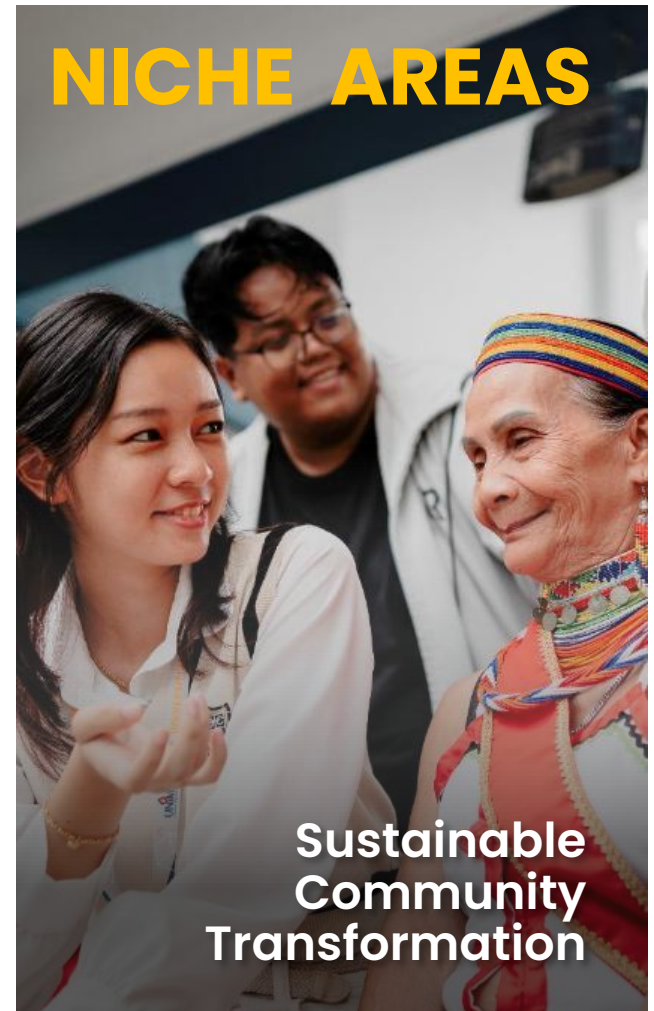
WE ARE



located in the heart of Borneo – the world’s richest site for biodiversity and indigenous knowledge, UNIMAS is a prominent global player in empowering communities, nurturing creativity and pioneering innovation for a sustainable world



**Biodiversity &
Environmental
Conservation**



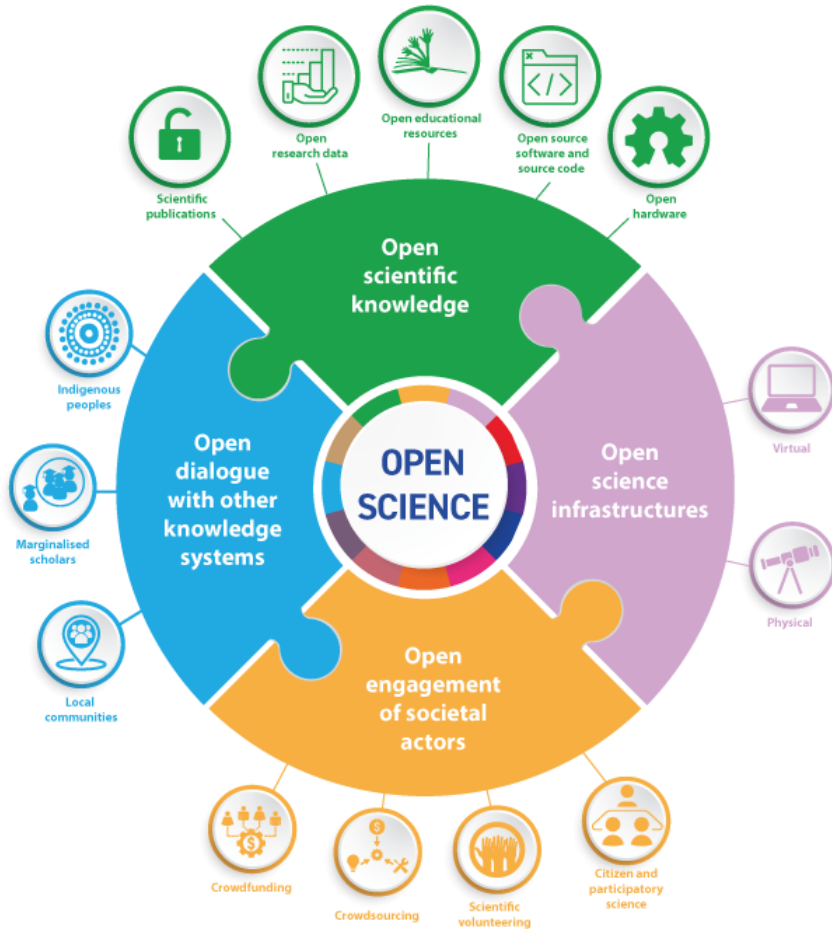
NICHE AREAS

**Sustainable
Community
Transformation**



**Information
Communication &
Creative Technology**

The
Dataverse[®]
Project 



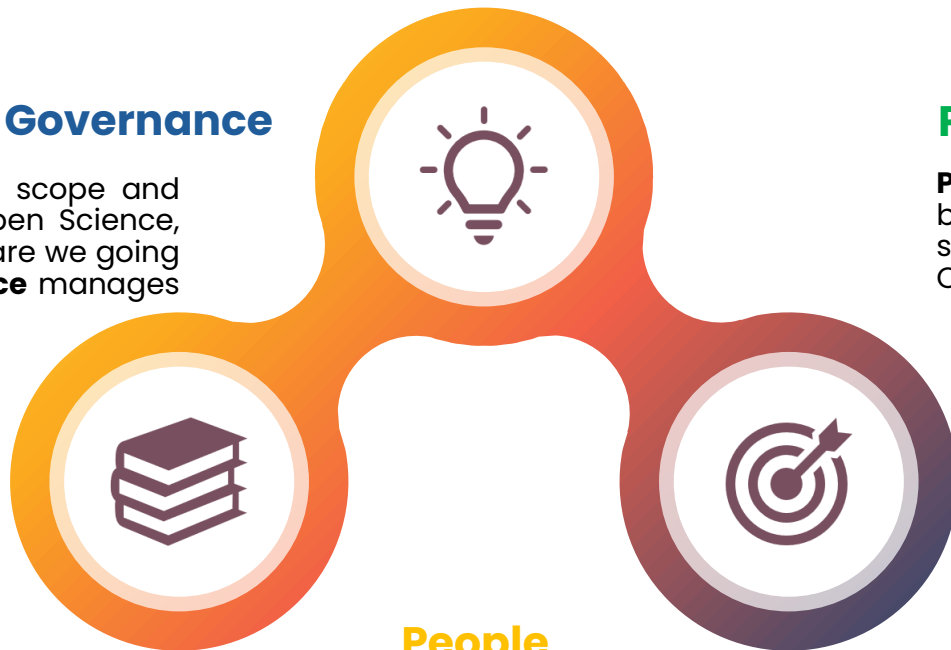
- A set of principles and practices that aim to make scientific research from all fields **accessible to everyone**.
- Making sure scientific knowledge is accessible and is **inclusive, equitable and sustainable**.
- The UNESCO Recommendation on Open Science provides an **internationally agreed definition**.

Three Pillars of UNIMAS Open Data

Policy, Guideline & Governance

Policy defines **what** is the scope and UNIMAS commitment to Open Science, the **Guideline** defines **how** are we going to do it, and the **Governance** manages the way we do it

- Research Data Management (RDM) Policy that ensure the research output are **FAIR**ly organised
- RDM system to guide the execution of the policy



Platform

Platform comprises both human and IT support to facilitate the Open Science Activities.

- The helpdesk and curation services operated by UNIMAS data stewards.
- The data repository and support team handled by the UNIMAS data custodians.

People

People are the main driver for the Open Science initiative that determines its success.

- Our Researchers – who produce the data
- Our Data Steward – who manage and curate the data
- Our Data Custodian – who will safeguard the data
- The Data User – who will benefit from the wealth of the data that has been shared by UNIMAS researchers

Open Science Practices

Current Practices in UNIMAS



Co-funded by
the European Union

Open Scientific Knowledge



Scientific
Publications



ELSEVIER

WILEY

emerald insight

Discover Journals, Books & Case Studies



Open Research
Data

UNIMAS Open Educational Resources

- Audio
- Images
- Text
- Videos



Open Educational
Resources



UNIVERSITI MALAYSIA SARAWAK

L4L
Platform

23 Massive Open
Online Courses
(MOOC)

Micro-credential
Courses

Open Scientific Infrastructure

UNIMAS Dataverse



Virtual

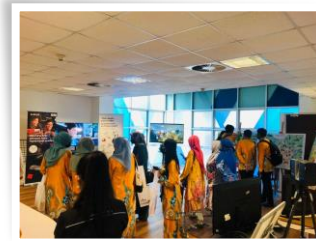


UNIMAS
UNIVERSITI MALAYSIA SARAWAK

INNOVATION
TECHNOLOGY HUB



Physical



Open Science Practices

Current Practices in UNIMAS (cont'd)



Open Dialogue with Other Knowledge System



Indigenous People



Marginalised Scholars



Local Communities



Open Science's Workshop



Crowdfunding



Crowdsourcing



Scientific Volunteering

Open Engagement of Societal Actors



Micro-Hydro Project



Balai Ringin, Samarahan




e-Bario Project



Bung Jagoi

UNIMAS Research Data Repository Platform



<http://www.data4research.unimas.my>

A fully functioning data repository platform has been established

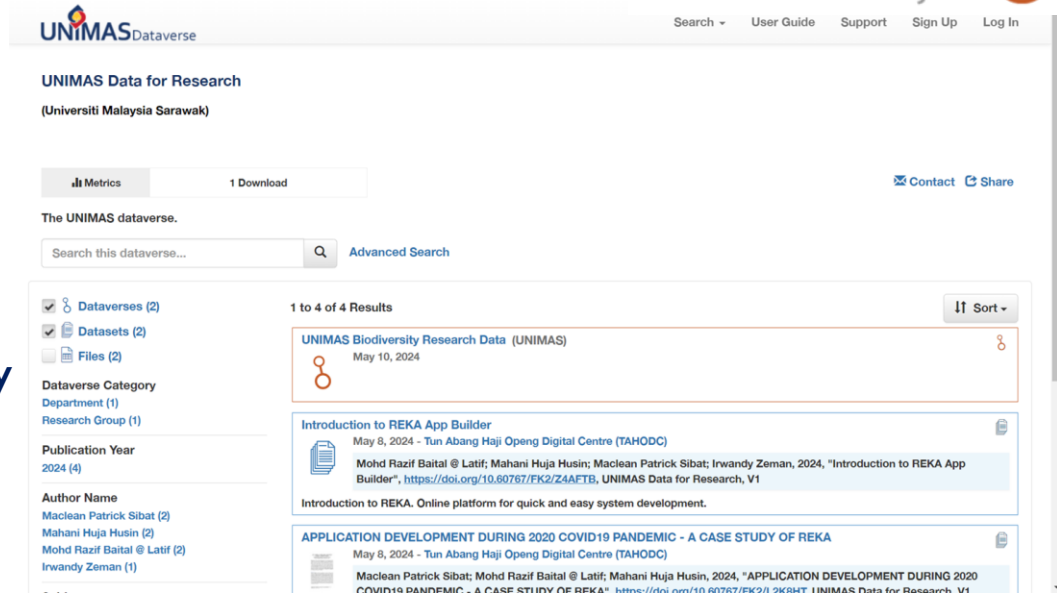
UNIMAS Open Science

Data Repository Platform

To consolidate
research data on
a common
platform

<http://www.data4research.unimas.my>

The
Dataverse
Project 



The screenshot shows the UNIMAS Dataverse website interface. At the top, the UNIMAS logo and 'Dataverse' text are visible. Below the header, there is a search bar and navigation links for 'Search', 'User Guide', 'Support', 'Sign Up', and 'Log In'. The main content area displays 'UNIMAS Data for Research (Universiti Malaysia Sarawak)' with a 'Metrics' section showing '1 Download' and 'Contact' and 'Share' buttons. A search bar is present with the text 'Search this dataverse...' and an 'Advanced Search' link. The search results section shows '1 to 4 of 4 Results' and a list of datasets. The first result is 'UNIMAS Biodiversity Research Data (UNIMAS)' dated May 10, 2024. The second result is 'Introduction to REKA App Builder' dated May 8, 2024, by Mohd Razif Baital @ Latif, Mahani Huja Husin, and Maclean Patrick Sibat. The third result is 'APPLICATION DEVELOPMENT DURING 2020 COVID19 PANDEMIC - A CASE STUDY OF REKA' dated May 8, 2024, by Maclean Patrick Sibat, Mohd Razif Baital @ Latif, and Mahani Huja Husin.

UNIMAS Data for Research

(Universiti Malaysia Sarawak)

Metrics

44 Downloads

Contact Share

The UNIMAS dataserve.

Search this dataserve...



Advanced Search

Dataserves (33)

Datasets (32)

Files (32)

Dataserve Category

Research Group (26)

Research Project (6)

Department (1)

Publication Year

2025 (23)

2024 (42)

Author Name

Lo, May Chiun (23)

Mohamad, Abang Azlan (16)

Ha, Shiw Tong (10)

Wan Ibrahim, Wan Hashim (9)

Thong, Jun Zhou (8)

1 to 10 of 65 Results

Sort ▾

Examining ecotourism destinations competitiveness and the moderating impact of social media marketing: Post-COVID-19 propositions for ecotourism industry actors

Jan 17, 2025 - Business, Finance and Economics

Thong, Jun Zhou; Lo, May Chiun; T. Ramayah; Mohamad, Abang Azlan, 2025, "Examining ecotourism destinations competitiveness and the moderating impact of social media marketing: Post-COVID-19 propositions for ecotourism industry actors", <https://doi.org/10.60767/FK2/FJLQDZ>, UNIMAS Data for Research, V1

This dataset explores the relationship between endowed resources (natural resources, cultural heritage attractions), supporting resources (accessibility, quality of tourism services), and ecotourism competitiveness in totally protected areas (TPAs) in Sarawak, Malaysia. The study...

Decomposing market orientation and its relationship to innovativeness of SMEs in Malaysia: the moderating effects of market turbulence

Jan 17, 2025 - Business, Finance and Economics

Ha, Shiw Tong; Lo, May Chiun; T. Ramayah, 2025, "Decomposing market orientation and its relationship to innovativeness of SMEs in Malaysia: the moderating effects of market turbulence", <https://doi.org/10.60767/FK2/YZCUJ2>, UNIMAS Data for Research, V1

This dataset examines the relationship between market orientation (customer orientation, competitor orientation, and inter-functional coordination) and innovativeness, as well as the moderating effects of market turbulence, in Malaysian SMEs. Data were collected from 180 SME owners...

Get Started on a Dataverse Repository



Co-funded by
the European Union



Search ▾

User Guide

Support

Sign Up

Log In

➔ Log In

Username/Email

Password

Log In

[Forgot your password?](#)

Other options

UNIMAS ID

You can convert a Dataverse account to use one of the options above.
[More information about account creation.](#)

[Sign up for a Dataverse account.](#)



UNIMAS Open Science Initiatives



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ABOUT US ▾

COLLECTIONS ▾

SERVICES ▾

RESEARCH SUPPORT ▾

MY LIBRARY

OTHER LINKS ▾

SEMINAR KEPUSTAKAWANAN 2025



Open Access

Open Access (OA) means that research outputs are made freely available on the web to all, with no (or limited) license restrictions. Therefore, PeTARY Research Repository System as an open access platform, was developed to enable PeTARY researchers to share their academic writings and research discoveries with the public.

[More](#)



Open Data

The concept of "open data" states that all people should have unrestricted access to data without any limitations on its usage or reuse. Open science, which emphasises the sharing of scientific knowledge and information to advance science more quickly and foster better scientific collaboration, depends heavily on open data.

Open Educational Resources

Open Educational Resources (OER) are learning, teaching, and research materials available for free use, reuse, adaptation, and distribution, either because they are in the public domain or released under an open license. While many OER are available, they often lack inclusive design, making them difficult for disabled students to use.

[More](#)

UNIMAS Open Educational Resources



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the European Union

OER

Open Educational Resources

AUDIO | IMAGES | TEXT | VIDEOS | AI TOOLS



ClickUp

ClickUp is a powerful tool with seemingly endless options for customization, so where you begin depends on what you want to get out of it.



Videos

Open Access Educational Resources in videos contribute to the accessibility and inclusivity of education by providing engaging and visual content that supports learning.

Feel free to browse the Resources video provided below.

- Adobe stock
- Artgrid
- Al-Jazeera Creative Commons Repository
- FedFlix
- Freerange Stock
- Folkstreams
- Hollywood Camera Work



Text

Open Access Educational Resources in text format refer to freely accessible written materials that are available online for educational purposes.

Feel free to browse the list of Open Access Educational Resources text provided below.

- 2012 Book Archive
- Agricola
- Academic Index
- Artcyclopedi
- Fontello
- FreeBooks4Doctors!
- Free Medical Journals
- Fribly
- Open Yale Courses
- OpenBook Publishers
- The Orange Grove (Florida's Open Educational Resource Repository)



Audio

Open Access Educational Resources in the audio format refer to freely accessible educational materials that are available in audio form and can be used, shared, and adapted without cost.

Feel free to browse the list of Open Access Educational Resources audio provided below.

- AShamaluevMusic
- AKM Music
- Artist
- Global Music Archive
- Hooksounds
- Hearthis.at
- PennSound: Authors
- The Public Domain Project by Pond5



Images

Open Access Educational Resources in images contribute to the democratization of education by providing educators, students, and the general public with a rich visual resource pool.

Feel free to browse the list of Open Access Educational Resources images provided below.

- ArtVee
- Adobe Stock
- ABSFreePic
- Albumarium
- AliceYellow
- Free Nature Stock
- Getty Images
- GRATISOGRAPHY
- Google Image (Advanced Search)
- Gettyimages
- The Public Domain Project by Pond5
- Public Health Image Library
- PublicDomainPictures.net
- Pubsubb



Co-funded by
the European Union

Guidelines of Open Science on Public Funded Research

Universiti Malaysia Sarawak
(UNIMAS)
Open Science
Research Data Management
Policy



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the European Union

Universiti Malaysia Sarawak (UNIMAS) Open Science Research Data Management Policy



Co-funded by
the European Union



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About

About us

Malaysia Open Science Platform (MOSP)

Open Science is a growing movement to make scientific research and data accessible to all. The international principle of making research data findable, accessible, interoperable and reusable (FAIR) will not only democratise knowledge; it will reinforce open scientific inquiry and integrity, enable better research management, and promote data-intensive research. Integrating the diverse data streams and huge datasets across multiple disciplines offers unprecedented insights and solutions towards local, regional and global complex challenges.

Recognising the importance of harnessing the potential impact of Open Science, the Ministry of Science, Technology and Innovation (MOSTI) and the Academy of Sciences Malaysia (ASM) is paving the way towards realising Malaysia Open Science Platform (MOSP) as a strategic transformative initiative to strengthen STI Collaborative Ecosystem for Malaysia. This initiative aims to make Malaysia's research data as a valuable

History

To foster the trust in data sharing and collaboration among main stakeholders of open science in Malaysia, ASM formed the Malaysia Open Science Alliance (MOSA), listed as below:

- Academy of Sciences Malaysia (ASM)
- Ministry of Higher Education (MOHE)
- Ministry of Natural Resources and Environment Sustainability (NRES)
- National Institute of Health (NIH)
- Jabatan Digital Negara (JDN)
- Ministry of Science, Technology and Innovation – Malaysia Science and Technology Information Center (MASTIC)
- Universiti Malaya
- Universiti Sains Malaysia
- Universiti Malaysia Terengganu
- Universiti Malaysia Sarawak
- Universiti Teknologi Malaysia



Malaysia is undergoing a myriad of transformations in research and innovation in higher education. Globalization has resulted in increased mobility, collaboration and revolutionized the way we teach and learn. As Malaysia's premier Research University, UM will continue to lead in research activities and create research impact that will benefit the society. "UM Research: Transforming Knowledge, Industries and Lives"

40 Research Datasets



The success of UPM as a prominent Research University is defined by its successive research transformations that have helped shape its academic and research excellence. Propelled by the success of its research and innovation ventures that span all areas of human endeavours, UPM always strives to evolve in response to the inevitable emergence of new areas in science, agriculture, medicine, engineering, education and the humanities.

76 Research Datasets



MOSTI Raw Data for Research and Sciences (RADARS) was developed through Malaysian Science and Technology Information Centre (MASTIC) in 2019. RADARS provides an open sharing platform for science and research raw data collected from agencies and departments under MOSTI. The majority of data listed in RADARS is freely available to public, provided that the user complies with all the terms and conditions set by the data owner.

63 Research Datasets



The Public Sector Open Data Portal archive.data.gov.my originally developed in-house was launched by YB. Datuk Joseph Entulu Anak Belaun, Minister in the Prime Minister's Department during the ASEAN CIO Conference 2014. Initially envisioned as a pioneering platform for accessing the nation open data sets, the portal has since evolved to cater to changing demands and technological advancements. Over time, the portal underwent several upgrades aligning it with global open data trends to ensure seamless access to its wealth of datasets. However, it is worth noting that as technological landscapes evolve, the portal has begun to transition into a legacy site, marking an era of its significant contribution to open data initiatives.

652 Research Datasets



Universiti Teknologi Malaysia (UTM) remains steadfast in its commitment to its core services, which are education and research, align with its vision to be a premier university providing world-class education and research. The designation of UTM as a research university on June 10, 2010, has led to the strengthening of science-based research, technology, and engineering, as well as strategic areas of new innovation. This has positioned UTM as a hub and leader in providing solutions to complex problems through knowledge and focused research approaches. The implementation of the tagline "Innovating Solutions" has also led to the advancement of UTM's research civilisation, positioning it as a nation's leading technology-based research university, leveraging state-of-the-art technology.

1410 Research Datasets



Universiti Sains Malaysia (USM) was established as the second university in Malaysia in 1969. 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 at its 17 academic schools on the main campus in the island of Penang; 6 schools at the Engineering Campus in Nibong Tebal; and 3 at the Health Campus in Kubang Kerian, Kelantan. 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, and policy research and international studies. In 2008, USM became the first university in the country 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.

79 Research Datasets



The Academy of Sciences Malaysia publishes open access, peer-reviewed and indexed multi-disciplinary research Journal, entitled ASM Science Journal. The Journal aims to disseminate advancements in the broad fields of medical, engineering, mathematical, physical sciences, chemical sciences and life sciences, and ICT. The Journal's ultimate aim is to serve research perspectives

42 Research Datasets



The revamped Public Sector Open Data Portal now rebranded as data.gov.my 2.0. Originally conceived to democratize access to the nation's wealth of open data, this updated portal represents a significant leap forward in terms of functionality, user experience and data accessibility. The revamped portal also boasts a host of new features, including advanced data visualization tools, customizable dashboards and interactive APIs empowering users to derive deeper insights and drive informed decision-making. Whether you are a data enthusiast exploring trends and patterns, a developer looking to build innovative applications or a policymaker seeking evidence-based solutions, data.gov.my 2.0 is your go-to destination for unlocking the power of open data. Join us on this journey as we continue to foster transparency, innovation and collaboration through the power of data.

140 Research Datasets



Since its establishment on May 18, 1970, Universiti Kebangsaan Malaysia (UKM) has not only fulfilled the vision of its founding fathers to accord Bahasa Melayu as the language of learning and scholarship but has also successfully produced intellectuals and scholars who are among the nation's pride. Starting out with only three faculties, it has since grown into 13 faculties, 13 research institutes of excellence and two commercial entities. UKM Holdings Sdn. Bhd. and UKM Technology Sdn. Bhd. It has thus grown not just in size, but also stature, becoming a research institute in various fields of study including operating various research centres.

20 Research Datasets



Universiti Malaysia Sarawak (UNIMAS), known as the community driven university is a Malaysian public university located in Kota Samarahan, Sarawak. Located in the heart of Borneo – the world's richest site for biodiversity and indigenous knowledge, From this unique position, UNIMAS plays a significant global role in empowering local and international communities, cultivating creative endeavours, and pioneering innovative solutions for a sustainable world. UNIMAS Data4Research, is specifically designed to facilitate the sharing, preservation, citation, exploration, and analysis of research data. This platform significantly enhances data accessibility for subsequent research replication and ensures that researchers, data authors, and publishers are appropriately recognised. UNIMAS culture of collaboration drives knowledge and discoveries in areas vital to our world, our health and our intellectual life.

42 Research Datasets

UNIMAS **Data Steward**



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the European Union



TRAINING PROGRAMME
on Data Stewardship for
Open Science

Trained and Certified by
**Akademi Sains
Malaysia**



Data Stewardship for Open Science Certification

27 Certified Data Stewards in UNIMAS



Co-funded by
the European Union



CERTIFICATE OF COMPLETION

This is to certify that

[Name]

has completed training on

Data Stewardship for Open Science Training Programme

from

12 August - 18 November 2024

Academician Datuk Dr Tengku Mohd Azzman Shariiffadeen FASc
President, Academy of Sciences Malaysia

Masters of Business Analytics



Co-funded by
the European Union

1	Course Name:	Applied Open Science for Global Business			
	Course Code:	EBX6X74			
	Course Classification:				
2	Synopsis:	This course introduces Open Science principles within global business contexts, combining theoretical foundations with practical applications. Students learn key Open Science practices including open-access publishing, data management, and resource sharing, while addressing contemporary challenges in sustainability and digital transformation. The course focuses on leveraging Open Science for business value creation, examining how transparency and collaboration drive innovation and sustainable business models. Through case studies and hands-on exercises, students develop practical skills for implementing Open Science strategies in business environments. Learning outcomes emphasize both academic and commercial applications, equipping students with tools for research transparency, international collaboration, and developing market-viable solutions while maintaining ethical standards.			
3	Name(s) of Academic Staff:	1			
		2			
		3			
4	Semester and Year offered:	Year Offered		Semester	Remarks:
5	Credit Value:				
6	Pre-requisite/ co-requisite (if any):				
7	Course Learning Outcomes (CLO)	CLO1	Apply Open Science principles to real-world business challenges that enhances organisational credibility by placing emphasis on transparency, reproducibility and ethical research practices. [A5 - Affective; Mapped to PLO4]		
		CLO2	Analyse global Open Science policies and initiatives to understand regional and international trends, identifying the impact of business and scientific communities worldwide. [C5 - Cognitive; Mapped to PLO1]		
		CLO3	Evaluate ethical and legal considerations in Open Science to ensure compliance and sustainability in global business contexts. [A4 - Affective; Mapped to PLO11]		
		CLO4	Examine the broader societal benefits of Open Science by assessing Open Science practices that build public trust, promote sustainable business models, and contribute positively to communities. [C6 - Cognitive; Mapped to PLO2]		

Introduction to Open Science

A Course for Researchers and Enthusiasts



Global Open Science Policies and Trends



Introduction to Key Open SCIENCE Activities





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the European Union



Seminar on Empowering Digitalisation: Inspiring Connections Through AI & Citizen Science

18 December 2024



DigitalNEXUS

UNIMAS DIGITAL TECHNOLOGY NEXUS 2025

1ST & 2ND JULY 2025 | HILTON KUCHING SARAWAK

CONNECTING THE *DIGITAL FUTURE*

SUPPORTED BY



EVENT PARTNERS



Community-Driven University For a Sustainable World



UNIMAS Dataverse

Introduction and Training



Co-funded by
the European Union



Open Data Training With Researchers and Students



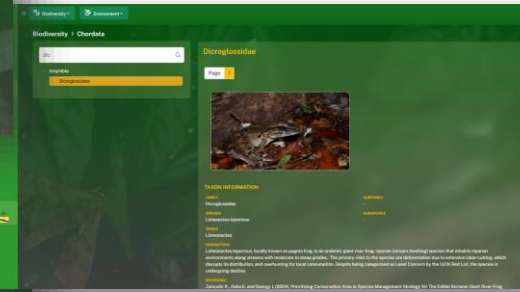
Co-funded by
the European Union



AI IN BIODIVERSITY OF BORNEO

AI BoB

Intelligent System for the
Biodiversity of Borneo





Rhacophoridae - *Nyctixalus pictus*

Bufoidea - *Ingerophrynus divergens*

Rhacophoridae - *Polyypedates coletti*

FROGS & TOADS OF BORNEO

200

SPECIES OF FROGS/TOADS
WITH 40% ENDEMISM

PENINSULAR MALAYSIA **110-130** SPECIES OF FROGS
WITH LESS ENDEMISM

**RATIO OF BORNEAN TO PENINSULAR MALAYSIA
SPECIES IS 1.5 (200:130)**

UNIMAS ZOOLOGICAL MUSEUM COLLECTIONS:
AMPHIBIANS (1997-2015)

~3190 INDIVIDUALS



Climate Change & Biodiversity

Why does climate change matter?

- Carbon storage & Climate regulation
- Habitat for endemics
- Ecosystem services

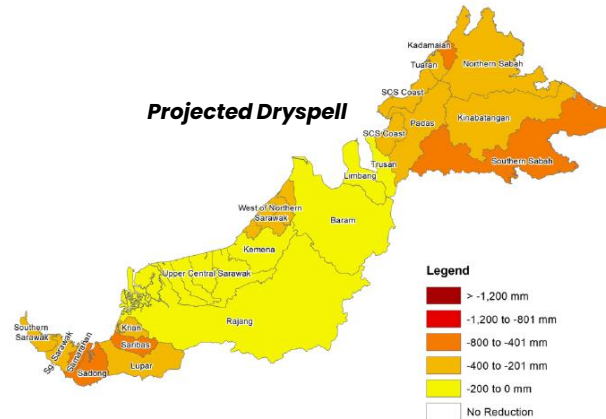
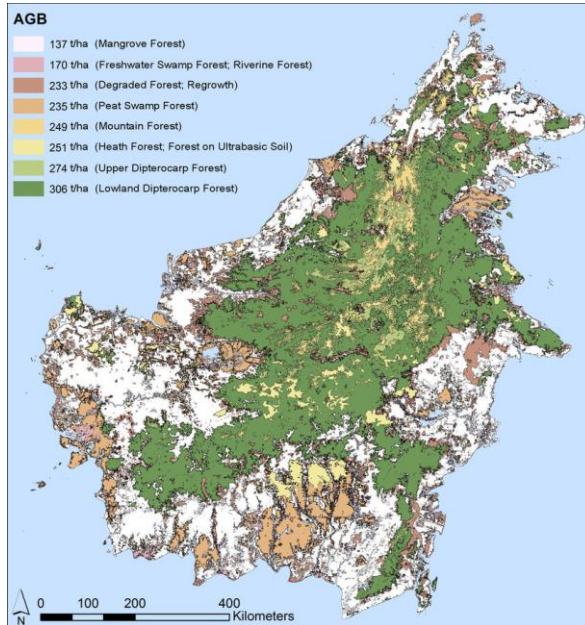
Climate change hotspot

- Peatlands fire & degradation
- Coastal area - sea-level rise
- Forest deforestation pressure

UNIMAS Expertise

How can UNIMAS lead?

- Environmental Science
- GIS and Remote Sensing
- Hydrology, Soil Science & Climate Resilience
- Environmental Remediation and Technology etc



Source: Malaysia's Fourth National Communication Report (NC4) (2024)

Institute of Biodiversity and Environmental Conservation (IBEC),
Water Research Centre,
Institute of Borneo Studies & Others

Impacts on Biodiversity



Coastal Mangroves
Loss due

Habitat destruction from fires



Peat Swamp Forests

Degraded spawning grounds



Endemic species

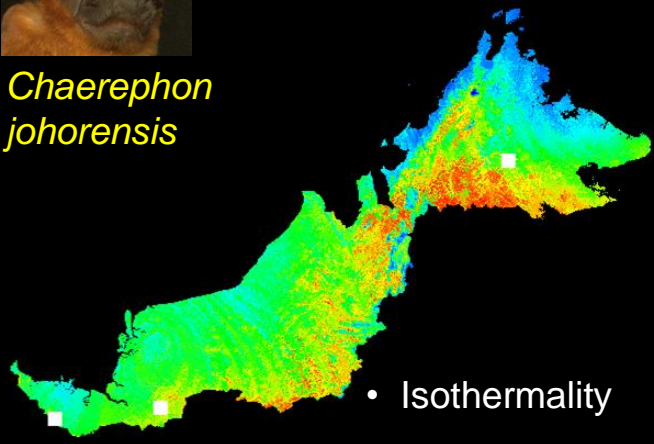


Endemic species threatened

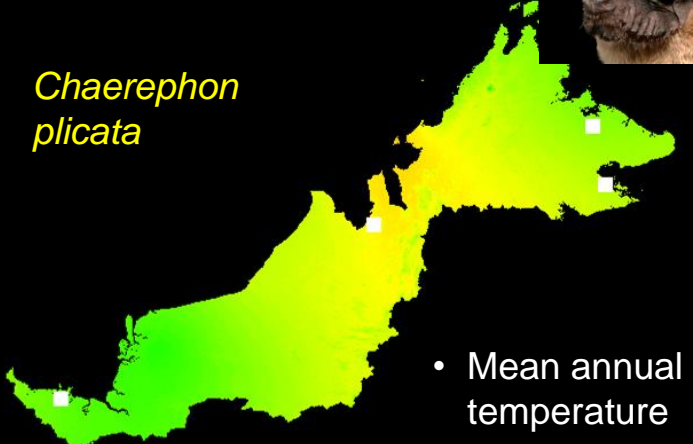
Endemic species threatened



Chaerephon johorensis



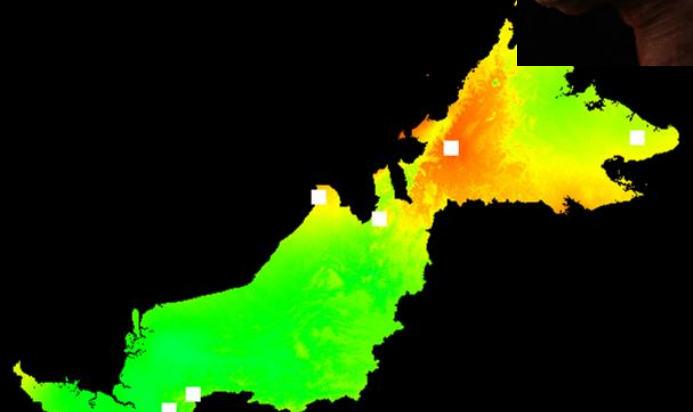
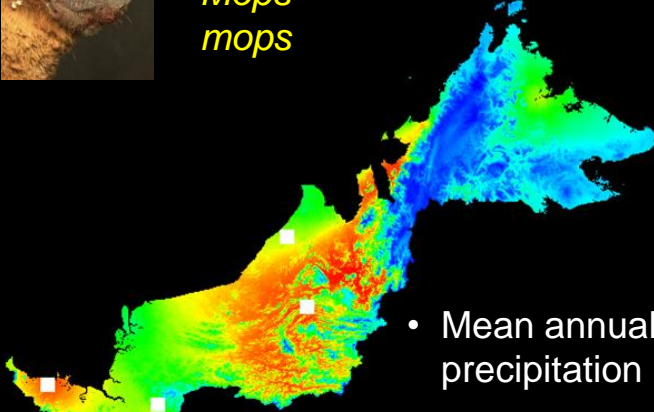
Chaerephon plicata



0.9
0.8
0.7
0.6
0.6
0.5
0.4
0.38
0.31
0.23
0.15
0.08
0



Mops mops



Khan et al. In

CITIZEN SCIENCE

ENGAGEMENT WITH INDIGENOUS COMMUNITIES AND SCHOOLCHILDREN





Co-funded by
the European Union

CITIZEN SCIENCE ACTIVITIES

Engagement with
Bukit Kuri Kalimantan Barat



THE SCIENCE AVENGERS
RESEARCH WITH
SMK LUNDU



Way Forward

Advancing Citizen Science in Sarawak

Incentivising a Culture of Openness

**Building Prestige
through Awards
and Visibility**



**Nurturing a Bottom-
Up Community
Practice**

**Focus on Direct
Support and
Resources**

State Engagement



Briefing on Open Science International Conference

with

**Sarawak Civil Service
Digitalisation Unit
(SCSDU)**

Industry Partner



Engagement with
**Sarawak Artificial
Intelligence Centre**
**ON OPEN DATA
INITIATIVES**

Future Collaborations



Sarawak **Museum** Department

Sarawak Borneo Cultural Museum

- Open Data
- Dissemination of Information



Sarawak State Library (PUSTAKA)



Co-funded by
the European Union



- Connect with existing Citizen Science Initiatives
- Leverage PUSTAKA's Open Data platform



IN COLLABORATION WITH



An aerial photograph of a university campus. In the center is a large, calm lake with a suspension bridge crossing it. The bridge has two tall white towers and several cables. To the left of the lake is a large building with a green roof. To the right is a cluster of multi-story buildings with red and white facades, and a tall, white, tower-like structure. In the foreground, there are several large, circular, white-roofed structures. The surrounding area is lush with green trees and grass. The text "Thank You" is overlaid in white on the left side of the image.

Thank You