Malaysia
Funds-in-Trust

# Concept Note

## Enhancing and Strengthening Regional Open Science Implementation Mechanism

8 – 10 March 2023, Kuala Lumpur, Malaysia

## BACKGROUND

The United Nations Educational, Scientific and Cultural Organization (UNESCO) has been working at the global level to encourage and support the shift to open science to bridge the knowledge and technology gaps between and within countries. Following a global multistakeholder consultative process, and a 2020 Joint Appeal for Open Science in which the Directors-General of UNESCO, World Health Organization (WHO), the European Organization for Nuclear Research (CERN), and the United Nations High Commissioner for Human Rights (UNCHR) reaffirmed on *the fundamental right to enjoy the benefits of scientific progress and its applications and advocated for open, inclusive and collaborative science*, a UNESCO Recommendation on Open Science was adopted unanimously by UNESCO's General Conference at its 41st session in November 2021.

In this Recommendation, Open Science is defined as an inclusive construct that combines various movements and practices aiming to make multilingual scientific knowledge openly available, accessible and reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society, and to open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community.

It comprises all scientific disciplines and aspects of scholarly practices, including basic and applied sciences, natural and social sciences and the humanities, and it builds on the following key pillars: open scientific knowledge, open science infrastructures, science communication, open engagement of societal actors and open dialogue with other knowledge systems.

The 7 key actions of the Recommendation are:

(i) promoting a common understanding of open science, associated benefits and challenges, as well as diverse paths to open science;
(ii) developing an enabling policy environment for open science;
(iii) investing in open science infrastructures and services;
(iv) investing in human resources, training, education, digital literacy and capacity building for open science;
(v) fostering a culture of open science and aligning incentives for open science;
(vi) promoting innovative approaches for open science at different stages of the scientific process;
(vii) promoting international and multi-stakeholder cooperation in the context of open science and with a view to reducing digital, technological and knowledge gaps.

The importance of promoting Open Science as the vision for the future of conducting science is shared by many, and it is gaining momentum across institutions, governments and regions at a global level. The roadmaps toward the OS vision are being shaped by guiding principles such as Open Access; the adoption of Open Data and FAIR (findable, accessible, interoperable and reusable) data principles and citizenship science; the recognition, support and training of researchers; the participation of communities; the development of infrastructures, policies and regulations; and the need for broader stakeholder engagement, coordination and high-level government support.

## OPEN SCIENCE IN ASIA AND PACIFIC REGION

Open Science is best characterized as the necessary transformation of scientific practice to adapt to the changes, challenges and opportunities of the 21st century digital era to advance knowledge and to improve our world. It is a vital enabler in maintaining the rigour and reliability of science; in creatively integrating diverse data resources to address complex modern challenges; in open innovation and in engaging with other societal actors as knowledge partners in tackling shared problems. It is fundamental to the realisation of the Sustainable Development Goals (SDGs).

It cannot be stressed enough on the important role of Open Science in increasing regional collaboration in solving regional and global issues and how it would enable greater potential for South-South Collaboration and provide opportunities for low-and middle-income countries to participate in major scientific research.

Following the "Regional Multi Stakeholders Workshop on Open Science for Networked Societies-4th Industrial Revolution and SDGs in Asia and the Pacific", held on September 16, 2019 at Jakarta, Indonesia, UNESCO Jakarta Office conducted post-workshop survey to understand the current status of open science in the region. Among the recommendations arising from the survey are the need to scale up capacity building initiatives to sensitize key stakeholders about Open Science and building on existing capacities; to pay key attention to Open Science/scientific research evaluation; to re-channel and establish innovative funding opportunities to ensure full actualization of Open Science in all countries and institutions and to establish effective strategies to guarantee research quality through scientific evaluation metrics and publication processes.

In 2021, the UNESCO Regional Science Bureau for Asia and the Pacific partnered with the Institute for Study and Development Worldwide on local and national mapping to identify implementation strategies and mechanisms already in place to enable open science in Asia and the Pacific, and to identify what more is needed. Focused on Malaysia, Republic of Korea, Pakistan, Samoa and Uzbekistan, the study showed that while there are many examples of good practice in aspects of open science, none of the focus countries currently has in place all the policies, infrastructure, awareness and capacity building needed.

The Open Science Forum for Asia and the Pacific, held in February 2021 in conjunction with the meeting of the Asia-Pacific Economic Cooperation (APEC) Policy Partnership on Science, Technology and Innovation (PPSTI) identified three important components of an Open Science initiative: policy, infrastructure and capacity building and awareness and agreed that for the initiative to be a success, all three components need to be addressed simultaneously by all stakeholders. In addition, the survey conducted by UNESCO Jakarta on Open Science Status in Asia and the Pacific Region found that there is a need to scale up capacity building initiatives to sensitize key stakeholders about Open Science and building on existing capacities.

However, there are still concerns and issues to be tackled that many consider as challenges to Open Science at its various dimensions – socio-cultural; technological; political; organizational; economic and also legal. For the Asia-Pacific region, a region that presents great historical, cultural,

and ethnic diversity with countries at a variety of stages of political evolution and economic development, it is all the more important that we develop a common regional understanding of Open Science to address these challenges.

An opportunity arises under the project "Leveraging MUCP impact through innovative South-South partnerships in the post-pandemic context" to build on the previous studies undertaken and initiatives implemented in the region, to further enhance and strengthen the regional Open Science implementation mechanism which is also one of the focuses of the MUCP-MFIT programme.

## MALAYSIA-UNESCO COOPERATION PROGRAMME (MUCP)

The project on "Leveraging MUCP impact through innovative South-South partnerships in the post-pandemic context" is being implemented within the overall portfolio of the Malaysia-UNESCO Cooperation Programme (MUCP) funded by the Malaysia Funds-in-Trust project with the UNESCO cluster office based in Indonesia. One of the project's main focuses is on enhancing and strengthening regional Open Science implementation mechanisms.

To realize the project's objective, UNESCO Jakarta is organizing a hybrid workshop in collaboration with the International Science, Technology and Innovation Centre for South-South Cooperation under the auspices of UNESCO (ISTIC) and the Science Technology Engineering Innovation Policy Asia and the Pacific Network (STEPAN) that aims to support:

- Enhancing a common understanding of open science and the necessity of public policy updates and further investment to promote open science through a hybrid workshop
- A key topic for public policy updates: improving the legal and institutional system of producing, managing, sharing, and utilizing the results of open R&D in a reliable and responsible manner, through an online training programme through the UNESCO e-learning platform
- Through the Science Technology Engineering Innovation Policy Asia and the Pacific Network (STEPAN) and MUCP platforms,
    - Promoting sharing of best knowledge management practices, open science policy information, and related data collected and analyzed among member states in the Asian-Pacific Region through the STEPAN platform
    - Enhancing regional and cross-border cooperation on open science and digital transition in the Asia-Pacific Region

## OBJECTIVES

This workshop has the following objectives:

1. To obtain regional feedback to enhance common understanding of Open Science and the effectiveness of public policy and investment to promote Open Science implementation mechanism
2. To come up with the recommendations on enhancing public policy and investment to promote Open Science implementation mechanism
3. To promote the sharing of best knowledge management practices, open science policy information and related data collected and analyzed among member states in the Asia-Pacific region through the STEPAN platform
4. To enhance regional and cross-border cooperation on Open Science and digital transition in the Asia-Pacific region
5. To produce, manage, share, and utilize the results, infrastructures, and processes of R&D and traditional and non-traditional knowledge systems

## FORMAT

This hybrid workshop will discuss on the public policy updates and further investment to promote open science and improving the legal and institutional system of producing, managing, sharing, and utilizing the results of open R&D in a reliable and responsible manner. It will introduce international open science strategic partners to share on their experience and challenges on implementing open science in their region/country.

The workshop will be a combination of sharing sessions, facilitated discussions, and breakout groups around key topics.

## WORKSHOP EXPECTED OUTCOMES

1. Regional feedback to enhance common understanding of Open Science and the effectiveness of public policy and investment to promote Open Science implementation mechanism with a list of indicators on how to monitor implementation progress
2. Recommendations on enhancing public policy and investment to promote Open Science implementation mechanism
3. Recommendations on producing, managing, sharing, and utilizing the results, infrastructures, and processes of R&D and traditional and non-traditional knowledge systems with features of an AP region OS platform

## VENUE

Seri Pacific Hotel
Jalan Putra, Chow Kit, 50350 Kuala Lumpur
https://www.seripacifichotel.com/

Online participation:
https://us02web.zoom.us/j/87113141325?pwd=enUrM24wSjNPZzZ4RW1XMTBCaC9xZz09
Passcode: 785448

| DAY 1<br>8 March 2023 (Wednesday) | |
|---|---|
| 08:00 – 09:00 | Registration |
| **Opening and Keynote Address** | |
| 09:00 – 09:45 | **Opening Remarks**<br><br>Associate Prof Dr Aini Suzana Ariffin, Chair of STEPAN<br><br>Academician Dato' Ir Dr Lee Yee Cheong FASc, ISTIC Honorary Chair<br><br>Representative from UNESCO<br><br>Tuan Haji Jasri Kasim, Secretary General, Malaysian National Commission for UNESCO<br><br>Mdm Ruziah Shafei, Deputy Secretary General (Planning and Science Enculturation), Ministry of Science, Technology and Innovation (MOSTI) |
| 09:45 – 10:15 | **Keynote Address**<br>Representative from UNESCO |
| 10:15– 10:45 | Group Photo<br>Coffee Break |
| **Session 1: Open Science Governance** | |
| 10:45 – 11:30 | **Scene Setting**<br>*Presentation on UNESCO Open Science Recommendation*<br>Representative of UNESCO Jakarta |
| 11:30 – 11:45 | **Workshop Briefing**<br>Associate Professor Dr Aini Suzana Ariffin - Chair, STEPAN |
| 11:45 – 12:00 | **Lightning Session 1**<br>*Open Science Governance*<br>Assoc. Prof. Dr Aini Suzana |
| 12:00 – 13:00 | **Sharing Session from Strategic Partners**<br>*Governance Structure for Open Science - on governance, legal framework, management of infrastructure, communication and talent development.*<br>1) Australian Research Data Commons (ARDC)<br>2) African Open Science Platform (AOSP) |
| 13:00 – 14:00 | Lunch |
| **Session 2: Perspectives on Open Science** | |
| 14:00 – 15:30 | **Roundtable Session**<br>Participant from each country/institution to give a brief status (approx. 5 minutes) on Open Science initiatives and implementation of their country/institution with a particular focus on policy and investment. |
| 15:30 - 16:00 | **Breakout Session 1** – *Issues and Challenges in Open Science Implementation*<br>A facilitator-led discussion to see from a regional perspective; the status and challenges in the current Open Science implementation mechanism. The breakout groups will also discuss the status and challenges for traditional and non-traditional knowledge systems.<br>Breakout Group 1: Participants in this group are Policy Makers<br>Breakout Group 2: Participants in this group are Practitioners |
| 16:00 – 16:30 | Coffee Break |

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| 16:30 – 17:30 | **Breakout Session 1** continue |
| 17:30 – 20:30 | Break and Dinner |
| 20:30 - 22:00 | **Group Discussion and Preparation for Presentation** |
| 22:00 | **End of Day 1** |

## DAY 2
## 9 March 2023 (Thursday)

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| **Session 3: Open Science Implementation** | |
| 08.45 – 09:00 | **Key Messages from Day 1**<br>**Briefing for Day 2**<br>Lead Facilitator: Assoc. Prof. Dr Aini Suzana |
| 09:00 – 09:30 | **Special Address**<br>Professor ChM Dr Noorsaadah Abd Rahman, Chairperson of Malaysia Open Science Platform (MOSP)<br>*Open Science in Malaysia and MOSP* |
| 09:30 – 09:45 | **Lightning Session 2**<br>*Open Science Policy Implementation*<br>Assoc. Prof. Dr Aini Suzana |
| 09:45 - 10:45 | **Sharing Session from Strategic Partners**<br>*Open Science Implementation Case Studies*<br>1) China (IKCEST) – *Open Science for Disaster Prevention & Management*<br>2) Indonesia (RINarxiv)- *Open Science Case Studies in Indonesia* |
| 10:45 – 11:15 | Coffee Break |
| 11:15 - 11.45 | **Presentation by Breakout Group Chairs on Breakout Session 1**<br>*Status & Challenges in Open Science Implementation* |
| 11:45 – 12:00 | **Lightning Session 3**<br>*Open Science Infrastructure*<br>Assoc. Prof. Dr Syed Norris Hikmi Syed Abdullah |
| 12:00 – 13:30 | **Breakout Session 2** – *Opportunities to Overcome Challenges*<br>A continuity from Breakout Session 1, this Breakout Session aims to identify opportunities and strategies to overcome key challenges identified in Breakout Session 1.<br>Breakout Group 1: Overcoming Key Challenge 1<br>Breakout Group 2: Overcoming Key Challenge 2<br>Breakout Group 3: Overcoming Key Challenge 3 |
| 13:30 – 14:30 | Lunch |
| **Session 4: Regional Collaboration** | |
| 14:30 – 15:15 | **Presentation by Breakout Group Chair on Breakout Session 2**<br>*How to Address Key Challenges in Open Science Implementation* |
| 15:15 – 15:45 | Mid Workshop Evaluation |
| 15:45 – 16:00 | **Lightning Session 4**<br>*Talent Development for Open Science*<br>Dr Rose Alinda Alias |
| 16:00 – 16:30 | Coffee Break |
| 16:30 – 16:45 | **Lightning Session 5**<br>*Traditional Knowledge System & Open Science*<br>Assoc. Prof. Ir Dr Hazlina Selamat |

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| 16:45 – 17:30 | **Breakout Session 3** - *Discussion on Regional Collaboration*<br>Breakout group 1 – Technology & Infrastructure<br>Breakout group 2 – Talent Development<br>Breakout group 3 – Traditional Knowledge |
| 17:30 – 20:30 | Break |
| 20:30 - 22:00 | **Group Discussion and Preparation for Presentation** |
| 22:00 | **End of Day 2** |

| **DAY 3**<br>**10 March 2023 (Thursday)** | |
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| **Session 5: Regional Collaboration** | |
| 09:00 – 09:15 | **Key messages from Day 1 and Day 2**<br>**Briefing for Day 3**<br>Lead Facilitator: Assoc. Prof. Dr Aini Suzana |
| 09:15 - 10:00 | **Presentation by Breakout Group Chairs on Breakout Session 3**<br>*Regional Collaboration* |
| 10:00 – 10:15 | **Lightning Session 6**<br>*Updates on Open Science in Asia and the Pacific 2023*<br>Dr Rose Alinda Alias/ Assoc. Prof. Ir Dr Hazlina Selamat |
| 10:15 – 10:45 | Coffee Break |
| 10:45 - 11:45 | **Sharing Session from Strategic Partners**<br>*Perspectives of Policy Makers and Practitioners on Open Science Policy and Investment*<br>1) Nanyang Technological university (NTU), Singapore, Open Science and Research Services Team (TBC)<br>2) African Science and Technology Policy Institute (ASTePI)<br>3) Korea Institute of Science and Technology Information (KISTI) (TBC) |
| 11:45 – 13:15 | **Breakout Session 4** - *Regional Cooperation for Open Science*<br>Breakout groups working in parallel on the key topics in Open Science and to also consider how to organize ourselves at the regional level? What should the regional interface of Open Science look like? Who should be engaged? Where do we start, what are the next steps? How would we fund it?<br>Breakout Group 1 – East & North East Asia<br>Breakout Group 2 – South East Asia<br>Breakout Group 3 – South and South West Asia |
| 13:15 – 14:30 | Lunch |
| **Session 6: Recommendations and Way(s) Forward** | |
| 14:30 – 15:15 | **Presentation by Breakout Group Chair on Breakout Session 4**<br>*Regional Cooperation for Open Science* |
| 15:15 – 15:45 | **Overall Recommendations** – Presented by the Organizing Team |
| 15:45 – 16:15 | **Final Evaluation** |
| 16:15 – 16:45 | Coffee Break |
| 16:45 – 17:15 | **Summary and Next Steps** |
| 17:15 – 18:00 | **Closing Words**<br>Sharizad Dahlan, Director, ISTIC |
| 18:00 | **End of Workshop** |

*In-person participation only*