



Workshop Report

AI Socialization: Gender Inclusion and Empowerment in Malaysia

Project Name:

Enhancing the Development of Standards and Frameworks
for Critical Technologies in Southeast Asia

AI Socialization & Training
Kuala Lumpur, Malaysia
15-17 March 2023



1. Key Outcomes and Highlights

- The Artificial Intelligence (AI) Socialization: Gender Inclusion and Empowerment in Malaysia, was held in Kuala Lumpur, Malaysia. This event was split into two aspects:
 - Day 1 socialization event included sessions on research report dissemination, women's dialogue, and networking, welcomed 43 participants, 26 female and 17 males.
 - i. 100% of participants were satisfied with the clarity, objective and all aspects and content of the Socialization event.
 - ii. 94% of participants were highly likely to use what they learned in the event in their daily work.
 - iii. 86% of participants agreed that the contacts established during the networking are useful for further AI collaborations.
 - Day 2-3 AI Trainings welcomed 17 participants, 11 female and 6 males.
 - i. 84% of participants were satisfied with the objectives, materials, and speakers during the training.
 - ii. Day 2 training with the Asian Institute of Technology, Thailand and Universiti Teknologi Malaysia presented three modules on AI introduction, Gender Bias, and AI ethical Policy, showing 4% increased knowledge with an average of 49% of participants answering the post-test correctly.
 - iii. Day 3 training with IEEE on AI standards showed an average of 54% right answers in the posttest.
- The event was concluded successfully, and the following needs were identified:
 - Malaysia has launched the National AI Roadmap, with the objective of developing an AI innovation ecosystem for AI development that utilizes quadruple helix collaboration focusing on the seven principles for Responsible AI. However, participants expressed that there is a need to further understand the implementation of these principles for Responsible AI and their impact in Malaysia, including awareness by stakeholders in the country.
 - Participants highlighted Malaysia's unique sociocultural aspects and expressed that these should be considered in further research when further developing ethical guidelines for AI that address potential gender biases.
 - Participants noted a need to further research the impact of AI and gender through an intersectional lens, especially how Women with Disabilities are specifically affected by AI biases and how these can be addressed to ensure they can fully reap the benefits of the technology.
- As a next step, more online workshops or training sessions targeting more non-governmental participants (academia and industry players) are considered to be conducted. The Government will also focus on developing practical steps to further address and mitigate gender bias in AI, for example by including an agenda for the implementation of Principles for Responsible AI.

2. AI Socialization: Gender Inclusion and Empowerment in Malaysia (15 March 2023)



Photo 1: Keynote remarks by YBhg. Datuk Ts. Dr. Mohd Nor Azman Bin Hassan, Deputy Secretary General, MOSTI

The AI Socialization: Gender Inclusion and Empowerment in Malaysia was held from 08:30-14:00 on Wednesday, 15 March 2023 at Majestic Hotel, Kuala Lumpur, Malaysia. A total of 43 participants attended.

The Opening began with keynote remarks by YBhg. Datuk Ts. Dr. Mohd Nor Azman Bin Hassan, Deputy Secretary General (Technology Development), Ministry of Science, Technology & Innovation (MOSTI). Dr. Hassan highlighted the rapid advancements in AI and how Malaysia is planning to develop a sustainable AI ecosystem guided by the

National AI Roadmap 2021-2025. He mentioned that AI ethics and responsibilities are also included in the roadmap, which incorporates the seven Principles of Responsible AI. Dr. Hassan further elaborated that MOSTI, with Universiti Teknologi Malaysia (UTM)'s support, is developing AI Ethics and Standards for Malaysia, as well as a governance framework. He also elaborated on how both the National AI Roadmap and the National Blockchain Roadmap integrated under one governance structure, with the support from 5 working committees, including one on law and ethics. Based on the 26 action plans per this combination, Dr. Hassan closed by highlighting some specific items (1.6, 1.7, 1.8, and 2.7), and noted his desire to further the conversations during the socialization event.

The Opening continued with recorded remarks by Ms. Atsuko Okuda, Regional Director for Asia and the Pacific, ITU. She expressed her appreciation to the Ministry of Communication and Digital (MCD), MOSTI, and MIMOS Berhad for co-hosting the Socialization and Training events, and highlighted the importance of ensuring discrimination are considered when designing AI policies, including frameworks, standards, policies, and initiatives at regional and national levels and with various key stakeholders from Government, Industry, Civil Society, and academia. She also thanked all partners for supporting this event, including MCD, MOSTI, MIMOS, Institute of Electrical and Electronics Engineers (IEEE), United Nations University Institute in Macau (UNU Macau), Asian Institute of Technology (AIT), Monash University, and other partners.



Photo 2: Participants at the AI Socialization: Gender Based AI Policy in Malaysia (15 March 2023) event.

Subsequently, Ms. Catherine Setiawan, Project Coordinator, ITU, provided a presentation on the “Enhancing the Development of Standards and Frameworks for Critical Technologies in Southeast Asia” project. She highlighted the project’s Theory of Change and Outputs and overviewed the past activities in 2021 and 2022 under the project.

Afterwards, Ms. Eleonore Fournier-Tombs, UNU Macau, provided a presentation on Gender Sensitive AI Policy in Southeast Asia. She highlighted the research findings UNU Macau discovered as part of the research under the project, including the specific state of AI policy and risks in Malaysia as well as specific case studies on AI deployment in Malaysia. She noted the opportunities for further AI policy



Photo 3: Presentation by Ms. Eleonore Fournier-Tombs, UNU Macau.

development in Malaysia, as well as future research and training considerations linked to gender and societal aspects. During the question-and-answer session, discussions were raised by participants about the need for research across siloes, both in Malaysia and globally, to incorporate gender in a cross-sectoral manner. Participants also highlighted the need to consider the sociocultural landscape of Malaysia and the importance of cultural context in the deployment of AI technologies when considering potential biases. Finally, participants noted a desire to understand more about networks that can be harnessed to mitigate the gender biases of AI, including at the ASEAN level.

The sessions were next followed by a Panel Discussion as part of the **Women Dialogue Series**. The panel discussion featured the following:

Moderator: Dr. Preeti Raghunath, Monash University

Speakers/Panelists

- **Dr. Nurfaadhina Mohd Sharef**, Associate Professor, Universiti Putra Malaysia
- **Dr. Jasmine Begum**, Director of Legal, Government & Corporate Affairs, Malaysia and New Markets, Microsoft
- **Dr. Sumitra Devi**, Head / Senior Vice President, Strategy & Policy, Malaysia Digital Economy Corporation (MDEC)



Photo 4: Panelists at the Women Dialogue Series in Malaysia

Dr. Nurfadhlin Mohd Sharef highlighted the definition of gender equality and the current gender gap, especially in the global AI field. She then elaborated on the status of female participation in the workforce, and how in Malaysia, there is increasing representation in high-level professional and technical roles. Dr. Sharef also noted how Malaysia has 48.6% of female Science, Technology, Engineering, and Mathematics (STEM) students in higher education, higher than the 35% globally. However, she noted that there are additional initiatives that can be considered to increase

women's participation, including gender-inclusive pedagogy, female mentorship, gender-responsive STEM education resource packs, retraining/reskilling strategies for gender-equitable digital transformation to mitigate automation-related job losses, and addressing biased datasets.

Dr. Jasmine Begum started by overviewing Microsoft's Six Basic Principles for Ethical AI. She further highlighted Microsoft's involvement in the development of the seven Principles of Responsible AI in Malaysia's National AI Roadmap 2021-2025. Dr. Begum shared examples of potential AI biases and the importance of incorporating different philosophical traditions that exist globally into AI ethics discussions. She noted that through this conversation, a global consensus can be reached building on these diverse philosophies, that can create the next generation of regulation and legal frameworks for AI. Dr. Begum then provided a sampling of the benefits of AI, including accessibility and humanitarianism, and the need to apply the principles of ethics in AI at every level.

Dr. Sumitra Devi overviewed global and Malaysian statistics on the gender divide in the technology field, including a number of reasons for this divide. She then highlighted the gender biases specific to AI, and the potential policies and regulations that can mitigate these biases. Dr. Devi noted that although stereotyping remains an issue, there is a need to change the mindset of women to ensure they can have the confidence to succeed. She highlighted how diversity, equity, and inclusion are being encouraged in the corporate sector in Malaysia, and the different policies and regulations that can help reduce the gender technology workforce divide.

During the subsequent discussions, the panellists highlighted the importance of cross-sectoral collaboration on AI, and that while AI is seen as a technical subject, it needs to be incorporated at all levels of education and not siloed. Panellists also noted the importance of Malaysia's diversity and how policymaking needs to consider the different sociocultural aspects, especially while ensuring that technology is an enabler for women to further succeed. Points were also raised by participants and discussants about the need to further understand how AI affects women in an intersectional manner, including for women with disabilities to mainstream them into the economy.



After the panel discussion, Mr. Calvin Chan presented on ITU and the potential opportunities for ITU membership. He also highlighted the project's Women AI Policy LinkedIn Group and encouraged participants to join and to further engage with the project as it continues its implementation.

3. AI Training (16-17 March 2023)

The AI Training in Malaysia was held from 08:30-17:00 on Thursday, 16 March 2023 (15 participants from government agencies) and Friday, 17 March 2023 (11 participants from government agencies) at Majestic Hotel, Kuala Lumpur, Malaysia.

The training featured 6 specific modules:

Module 1: Introduction to AI for Policymakers

This module was led by Dr. Mongkol Ekpanyapong, AIT. He presented the history of AI and the development of data-driven decision-making on structured data, including case studies on how AI makes decisions. He also trained policymakers on how AI moved beyond shallow models and how the learning process can become biased. He further discussed how deep learning works in the visual and text domain, including with ChatGPT and other large language models. Finally, he noted the debate on general AI, before leading the participants into an exercise where they discussed different AI systems in implementation in Malaysia and the type of AI used, the location of the data, the training/updating of the model, and how the application can be further improved.

Module 2: Gender and societal risks in AI

This module was led by Professor Joyee S. Chatterjee from AIT. She discussed the technology-society interface and how AI systems can lead to potential gender biases. She also discussed the definition of gender and the feminization of AI and its concomitant gender division of labour, as well as how algorithms can lead to a vicious circle of biases. Professor Chatterjee noted that gender-neutral approaches can increase gender inequalities and that there is a need to address these shortcomings and work towards safeguards and gender-aware regulatory standards and policies. Subsequently, the participants were brought into an exercise where they identified the high-risk AI implementation in Malaysia and how it can create different forms of vulnerabilities, including gendered risks, as well as potential strategies to mitigate these shortcomings.

Module 3: From Ethics to Policymaking in AI (Malaysia national context)

This module was led by Dr. Aini Suzana, Universiti Teknologi Malaysia. She started by providing an overview of the policy development process, including specific examples in Malaysia. Dr. Suzana then overviewed how Malaysia's National AI Roadmap was developed, including how to form the project team and stakeholder engagement, as well as the entire policy development process that happened in actuality for the Roadmap. She overviewed how Malaysia was benchmarked in AI development against other countries, and the questions raised about AI ethics that led to the creation of Seven



principles of Responsible AI. However, she highlighted that there is limited data on the implementation of these principles in Malaysia, as well as a lack of research on the readiness/awareness of these principles. Participants were then broken into a group exercises to develop potential indicators that could assist with measuring the principles in the National AI Roadmap.

Module 4: From How Standards Support Critical and Emerging Technology, especially Artificial Intelligence (AI)

This module was led by Ms. Patricia Shaw and Mr. Munir Mohammed from IEEE. They started by overviewing IEEE and the definition of standards. They noted the growing role of AI and implementation challenges and the importance of mainstreaming sustainability in the discussions as well as human-centric design. They highlighted related risk elements, including socio-technical risks, and that there was a mapping of all technology ethics papers across the globe, which showed a common taxonomy, but not commonality of purposes or local interpretation.

Module 5: International Standardization on AI

This module was led by Ms. Patricia Shaw and Mr. Munir Mohammed from IEEE. They overviewed the global standardization landscape linked to AI, as well as ethically linked design and IEEE sociotechnical standards. They highlighted the IEEE 7000 series standards, including IEEE 7003 standard on algorithmic bias consideration. They provided a deep dive example of IEEE's sociotechnical standards and its values-based system design, as well as further elaborating on the IEEE 7010 2020: Societal Impact Assessment Framework standard. Both trainers also discussed AI ethics systems certifications and the different steps involved.

Module 6: Gender Responsive Standard

This module was led by Ms. Patricia Shaw and Mr. Munir Mohammed from IEEE. They highlighted different research reports on gender equality and social inclusion, including IEEE's AI Ethics and Governance Standards program, as well as IEEE's AI Ethics Readiness Framework. They noted the need to address gender biases that already exist and to upskill training and access to networks for women in the STEM fields. They also noted the importance of considering redress mechanisms for AI algorithmic biases.



Annex 1 - Agenda

AI Socialization: Gender Inclusion and Empowerment Wednesday, 15 March 2023 Majestic Hotel, Kuala Lumpur, Malaysia 08.30-14.00

Venue: Majestic 2 Room, Level 3

Time	Activity	Details	Speakers
08.30-09.00	Registration		
09.25-09.35	<u>Opening</u>	<ul style="list-style-type: none"> Keynote by YBhg. Datuk Ts. Dr. Mohd Nor Azman Bin Hassan, Deputy Secretary General (Technology Development), Ministry of Science, Technology & Innovation Keynote by Ms. Atsuko Okuda, Regional Director, International Telecommunication Union (ITU) 	
09.35-09.40	Photo session		
09.40-09.45	<u>Presentation on the Project</u>	<p><i>"Enhancing the Development of Standards and Frameworks for Critical Technologies in Southeast Asia"</i>: by Catherine Setiawan, ITU</p>	
09.45-10.00	Coffee Break		
10.00-11.00	<u>Research Report Dissemination</u>	<p><i>"Gender Sensitive AI Policy in Southeast Asia"</i>, by Dr. Eleonore Fournier- Tombs, UN University of Macau (Access the report, here)</p> <p>Moderator: Dr. Preeti Raghunath, Monash University</p>	
11.00-12.20	<u>Women Dialogue Serie: Gender Inclusion and Empowerment in Malaysia</u>	<p>Speakers:</p> <ul style="list-style-type: none"> Dr. Nurfadhlina Mohd Sharef, Associate Professor, Universiti Putra Malaysia Dr. Jasmine Begum, Director of Legal, Government & Corporate Affairs, Malaysia and New Markets, Microsoft Dr. Sumitra Devi, Head / Senior Vice President, Strategy & Policy, Malaysia Digital Economy Corporation (MDEC) <p>Moderator: Dr. Preeti Raghunath, Monash University</p>	
12.20- 12.35	<u>Wrap-up</u> , by Calvin Chan, ITU	<ul style="list-style-type: none"> A presentation about ITU membership & Women AI Policy LinkedIn Group Monitoring & Evaluation 	
12.35-14.00	Networking Lunch		



AI Training
Thursday- Friday, 16-17 March 2023
Majestic Hotel, Kuala Lumpur, Malaysia
08.00-17.00
(Only for Government)

Venue: Majestic 1 Room, Level 3

Thursday, 16 March 2023

Time	Activities	Detail	Proposed speakers
08.30-09.00	Registration <ul style="list-style-type: none"> Pre-test (M&E) 		
09.30-11.00	Training to Policymakers	Part 1: Introduction to AI for Policymakers	Dr. Mongkol Ekpanyapong Asian Institute of Technology
11.00-11.30	Photo Group & Coffee Break		
11.30-13.00	Training to Policymakers	Part 2: Gender and societal risks in AI	Dr. Joyee S. Chatterjee Asian Institute of Technology
13.10-14.30	Lunch		
14.45-16.15	Training to Policymakers	Part 3: From Ethics to policymaking in AI (Malaysia National Context)	Dr. Aini Suzana Universiti Teknologi Malaysia
16.15-16.30	Discussion & Closing Post-test (M&E)		
16.30-17.00	Coffee Break		

Friday, 17 March 2023

Time	Activities	Detail	Proposed speakers
08.30-09.00	Registration & Coffee Break <ul style="list-style-type: none"> Pre-test (M&E) 		
09.30-11.00	Training to Policymakers	Part 4: AI Standardization	Ms. Patricia Shaw Mr. Munir Mohammed IEEE
11.00-12.00	Training to Policymakers	Part 5: Ethical AI Standardization <ul style="list-style-type: none"> Gender Responsive Standard 	Ms. Patricia Shaw Mr. Munir Mohammed IEEE
12.00-12.15	Photo Group		
12.15-14.30	Friday Prayer and Lunch		
14.30-16.30	Training to Policymakers	Part 6: Tools for Policy Makers	Ms. Patricia Shaw Mr. Munir Mohammed IEEE
16.30-16.45	Discussion & Closing (Post-test (M&E))		
16.45-17.00	Coffee Break		



Annex 2 – Attendee List

Day 1

Name	Position	Organization
Jack Tan	Head of Business Development	BookDoc
Azizi Ab Aziz	Researcher	Universiti Utara Malaysia
Meisin Lee	Researcher	Monadh University
Fairoza Amira Binti Hamzah	President	Women in AI Malaysia
Gaayathrey Balakrishnan	Capacity Building Officer	Women's Aid Organisation
Adelina Zulkifli	Capacity Building Officer	Women's Aid Organisation
Tay Chai Chia	Corporate Finance	-
Eva Svani	CONSULTANT	TECH ASIA CONSORTIUM
James G	MANAGING DIRECTOR	TECH ASIA CONSORTIUM
Gladys De Silva	Managing Director	Asia Consultancy Services Sdn Bhd
tengsong chou	lecturer	TAR UC
Siti Sofiah Mohd Radzi	Staff Researcher	MIMOS Berhad
M.G. Ong	Principal	DigiRity PLT
Wong Mun Ching	IT Manager	Intersoft
Rizatuddin Ramli	Partnership and Development Officer	UNRC
Noor Asmaliza Romlee	Key expert	EU Malaysia Partnership
Norlela		Kementerian Belia
Paul Chang		
Maria Liew		
Linda Lee		Great Eastern Life
Josephine Wong	Executive	Corpacer
Marsha Ahmad	Founder	Goremas
May Yee Ng	Asst Professor of Law	All Women's Action Society
Yoke Mei Loo	Assistant Professor	Heriot Watt University
Siti Norlailasari Abdul Rahman	Senior Director	Min. of International Trade & Industry
Sidhu Jasyindar Singh	Senior Principal Assistant Director	Ministry of Domestic Trade
Puspha Al Bakri Devadson	Deputy Under Secretary	Ministry of Communications and Digital
Li Ling Wee	Principal Assistant Secretary	Ministry of Communications and Digital
Fairuz Husna Muhamad Farid	Assistant Secretary	Ministry of Communications and Digital
Airull Azizi Awang Lah	Principal Assistant Secretary	Ministry of Science Technology and Innovation



Maisara Edina Redzemi	Assistant Manager	MPC
Nazhatul Hafizah Kamarudin	Assistant Professor	UCSI University
Mathew Maavak	Research Associate	STEPAN (UNESCO)
Nazarudin Mashudi	Principal Engineer	MIMOS Berhad
Nastassja Nicolette Mojito	Senior Executive	Yayasan Inovasi Malaysia
Marizuana Mat Daud	Senior Researcher	MIMOS Berhad
Norhaslinda Kamaruddin	Associate Professor	Universiti Teknologi MARA
Halema Shahjahan	Principal Assistant Secretary	MOSTI
Muhd Akmal Radzuan	Assistant Secretary	Ministry of Communications and Digital
Laurence Sebastian	Secretariat	MIMOS Berhad
Mohd Faizal Amin	Secretariat	MIMOS Berhad
Nor Karimi Md Din	Secretariat	MIMOS Berhad
Zainal Mohd Noor	Secretariat	MIMOS Berhad
Calvin Chan	Programme Administrator	ITU
Buahorm Thaworn		ITU
Catherine Setiawan		ITU
Munir Mohammed		IEEE
Patricia Shaw		IEEE
Nurfadhlin Mohd Sharef		UPM
Preeti Reghunath		Monash University
Sumitra Devi		
Jasmine Begum		Microsoft



Day 2

Name	Position	Organization
SITI NORLAILASARI ABDUL RAHMAN	Senior Director	Min. of International Trade & Industry
Hani Shalilaa Zulkifli	Administrative and Diplomatic Officer	Ministry of Tourism, Art and Culture
Fairuz Husna Muhamad Farid	Assistant Secretary	Ministry of Communications and Digital
Suriyana Mohamed	Pen Peg Teknolgi Maklumat	KDN
ZULAIKHA AHMAD	PRINCIPAL ASSISTANT DIRECTOR	FIRE AND RESCUE DEPARTMENT OF MALAYSIA
Mohd Aniq Firdaus Mohd Yuzaidy	Administrative and Diplomatic Officer	Ministry of Science, Technology & Innovation
Nazhatul Hafizah Kamarudin	Assistant Professor	UCSI University
Nazarudin Mashudi	Principal Engineer	MIMOS Berhad
Siti Mariam Nur Ulfah Zulkipli	Executive	Yayasan Inovasi Malaysia
Marizuana Mat Daud	Senior Researcher	MIMOS Berhad
Nurul Haszeli Ahmad	Senior Principal Consultant	SIRIM Berhad
Laurence Sebastian	Secretariat	MIMOS Berhad
Mohd Faizal Amin	Secretariat	MIMOS Berhad
Zainal Mohd Noor	Secretariat	MIMOS Berhad
Tengku Intan Narqiah Tengku Othman	Group Chief Future Officer	SIRIM Berhad
Calvin Chan	Programme Administrator	ITU
Buahorm Thaworn		ITU
Catherine Setiawan		ITU
Munir Mohammed		IEEE
Patricia Shaw		IEEE
Joyee Chatterjee		AIT
Mongkol Ekapanyong		AIT
Aini Suzana		UTM

Day 3

Name	Position	Organization
SITI NORLAILASARI ABDUL RAHMAN	Senior Director	Min. of International Trade & Industry
Hani Shalilaa Zulkifli	Administrative and Diplomatic Officer	Ministry of Tourism, Art and Culture
Fairuz Husna Muhamad Farid	Assistant Secretary	Ministry of Communications and Digital



Nazhatul Hafizah Kamarudin	Assistant Professor	UCSI University
Nazarudin Mashudi	Principal Engineer	MIMOS Berhad
Marizuana Mat Daud	Senior Researcher	MIMOS Berhad
Nurul Haszeli Ahmad	Senior Principal Consultant	SIRIM Berhad
Mohd Faizal Amin	Secretariat	MIMOS Berhad
Saidatul Izyanie Kamarudin	Senior Lecturer	UITM Syah Alam
Nurhazatul Eadora Ulul Azmi	Accountant	Yayasan Inovasi Malaysia
Zainal Mohd Noor	Secretariat	MIMOS Berhad
Buahorm Thaworn		
Catherine Setiawan		
Munir Mohammed		
Patricia Shaw		
Joyee Chatterjee		
Aini Suzana		