

Australian Government Department of Foreign Affairs and Trade

Australia's APEC Support Program (AASP)

CASE STUDY

WOMEN IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM)

KEY POINTS

- The Australia APEC Support Project Fund (AASP) project supported 40 women researchers from Official Development Assistance (ODA)eligible APEC economies by providing opportunities to collaborate with Australian experts and STEM access facilities.
- The project supported the mobility of women researchers in STEM and facilitated knowledge transfer between Australia and developing APEC economies, which has led to enhanced capabilities in the targeted STEM fields in the respective developing economies.
- The project demonstrated Australia's strong commitment to promoting women in STEM for regional economic development.
- The project established a comprehensive support



structure to address common barriers faced by women in STEM.

 Researchers accessed expertise and equipment not available in their home economies, while host institutions benefited through publications, new research collaborations, and fresh insights from the fellows.

TIMELINE

The first phase of the project started in March 2022 and ended in May 2023. The second phase of the project ran from May 2023 to August 2024.

PROJECT RATIONALE

The APEC-Australia Women in STEM Research Fellowship project has supported 40 women researchers from ODA-eligible economies (such as Malaysia, Viet Nam, Indonesia, Mexico, Philippines, Thailand and China) to further their careers in Science, Technology, Engineering and Mathematics (STEM)-related research in partnership with Australian universities. The project aligns with the <u>APEC Education</u> <u>Strategy</u> and, more broadly, with the <u>Australian Strategy for International</u> <u>Education 2021-2030</u>, particularly in developing high-quality international research partnerships with APEC economies and promoting Australia as an attractive partner for international research collaboration.

Through these fellowships, women researchers from the region had the opportunity to work with Australian experts and utilise materials and equipment in Australian research facilities. The fellowships aimed to strengthen the STEM capabilities of the selected women participants and research collaboration between those women and the supporting host institutions. Supporting human capital development in STEM fields in developing economies is crucial for responding to health, economic, and development challenges in the region.

OBJECTIVES

The fellowship objectives included to:

- 1. Enhance researchers' careers through skills development, research advancement, and professional network expansion within APEC.
- 2. Provide benefits to host institutions.
- Generate potential future research collaborations with host institutions and other women researchers in their home APEC economies.
- 4. Alleviate constraints and barriers faced by women researchers.

APPROACH

The project took a combined approach, consisting of:

Support for mobility and knowledge transfer

This activity aimed to provide research fellows from Indonesia, Malaysia, Mexico, the People's Republic of China, Thailand, the Philippines, and Viet Nam with opportunities to work in advanced research areas at Australian universities, utilising state-of-the-art facilities across Australia.

Collaboration between fellows and their host institutions

While working within these institutions, fellows made efforts to create future opportunities for other researchers from their home universities and enhance collaboration between the two institutions.

Easing constraints on women in STEM

The program provided targeted support for women in STEM to undertake international research fellowships. This included financial, administrative, and logistical assistance to mitigate barriers encountered by women researchers. Some fellows noted that being able

"The fellowship significantly helped address barriers related to my responsibilities as a mother of two young children, aged three and four which were affecting my participation as a female researcher in the STEM field. Specifically, the fellowship provided flexible working hours, allowing me to balance my research activities with my parental duties. Additionally, the fellowship offered financial support for childcare services, ensuring my children were well taken care of while I focused on my research."

(Anonymous, 2023 Fellowship Evaluation Survey)

to bring their children with them to Australia significantly facilitated their ability to accept such opportunities for extended travel for work.

OUTCOMES

Increased skill development and career prospects

Several participants reported that the program had significantly supported their skill development and career prospects. Access to expertise and equipment in Australia allowed participants to enhance their learning in ways that may not have been possible in their home economies. One participant noted:

"The program enriched and broadened my perspective both professionally and personally. This fellowship also strengthened my CV as a scientist. This fellowship allowed me to achieve a high credit point for the promotion in my professional career in academia."

(Anonymous, 2023 Fellowship Evaluation Survey)

Provide benefits to the host institution

Supervisors reported numerous advantages for their research groups and host institutions, such as the

BENEFITS EXPERIENCED BY DEVELOPING ECONOMIES

- Supported the mobility of women researchers in STEM and enabled knowledge transfer between Australia and the Fellows.
- Facilitated engagement in advanced research activities and access to state-of-theart facilities in Australia for STEM researchers from developing economies.
- Enhanced the careers of women in research (through skills development, research development, and professional networking opportunities within APEC)
- Generated future research collaborations (with the host institution, within the home developing economy, and with other women researchers in APEC)
- Participants returned to their home economies with enhanced capabilities in their respective STEM fields, thereby supporting inclusive growth outcomes.
- Eased the constraints or barriers women STEM researchers face in developing economies through direct financial, administrative, and networking support.

publication of journal articles, conference presentations, internal departmental seminars, access to new ideas, research collaborations with international counterparts, and support for local students. One supervisor commented:

"The opportunity to host the participant through the APEC fellowship enabled us to work on new areas of materials chemistry, and this collaboration will continue

GENDER

This program was designed to support women in STEM in undertaking research fellowships in Australia, thereby advancing their career and professional prospects. It aligns with key action areas of the APEC La Serena Roadmap for Women and Inclusive Growth by addressing barriers to gender stereotypes in education, training, and skills development, as well as challenges to women's access to and retention in STEM fields. The program included specific provisions for childcare support, offering additional funding for participants who wished to bring children with them to Australia. Flexible timing options were also provided to accommodate women balancing family and professional responsibilities.

LINKS:

- 1. <u>https://www.apec.org.</u> <u>au/2023-results-apec-women-fel-</u> <u>lowship_</u>
- <u>https://www.linkedin.com/feed/update/</u>
- 3. Dr Syuhaida Binti Ismail, <u>https://</u> vimeo.com/891339954/ c7f-1c40852?share=copy
- 4. ChM Aemi Syazwani Abdul Keyon <u>https://vimeo.</u> <u>com/903177790/9823544f75</u>
- Fiona Morris, Counsellor (Education & Research) <u>https://vimeo.</u> <u>com/903586920/d1db27dc09</u>

through her ongoing support of one of our PhD students."

(Anonymous, 2023 Fellowship Evaluation Survey)

Generate possible future research collaboration (with the host institution, within home APEC economy, with other women researchers)

Several supervisors and fellows expressed their intentions to continue their research collaborations after returning home and to leverage their relationships to encourage greater engagement between their institutions. One supervisor reflected:

"A positive outcome is the research collaboration that emerged between the University of Melbourne and Universiti Teknologi Malaysia, resulting in three published papers and three conference presentations."

(Anonymous, 2023 Fellowship Evaluation Survey)

Ease constraints or barriers faced by women researchers

The program provided targeted support for women in STEM from APEC developing economies to undertake international research fellowships. It offered financial, administrative, and logistical assistance to help ease the barriers faced by women researchers. Participants' feedback indicated that bringing their children to Australia was immensely beneficial, allowing them to accept work opportunities for extended periods. One fellow shared:

"With the support of the fellowship, I was able to bring my two children to Tasmania, creating intergenerational ties between Malaysia and Australia in STEM research... my daughter benefited from the STEM culture from myself as a researcher as well from the school she attended."

(Anonymous, 2023 Fellowship Evaluation Survey)

LESSONS LEARNED

Finding suitable housing

Most fellows reported that finding suitable and affordable shortterm accommodation was both challenging and expensive. This issue could be alleviated in the future by asking host supervisors to include the organisation of short-term accommodation as part of their project planning.

Length of Fellowship

Some academic supervisors expressed that a longer fellowship period (at least four to six months) would have been beneficial for completing more research and gaining useful outcomes.

Cover photo: AASC - Australia's Counsellor for Education and Research in Malaysia Fiona Morris with Dr Aemi Syazwani Abdul Keyon and Dr Syuhaida Ismail discussing their experiences as 2022 recipients of the APEC-Australia Women in Research Fellowship.



