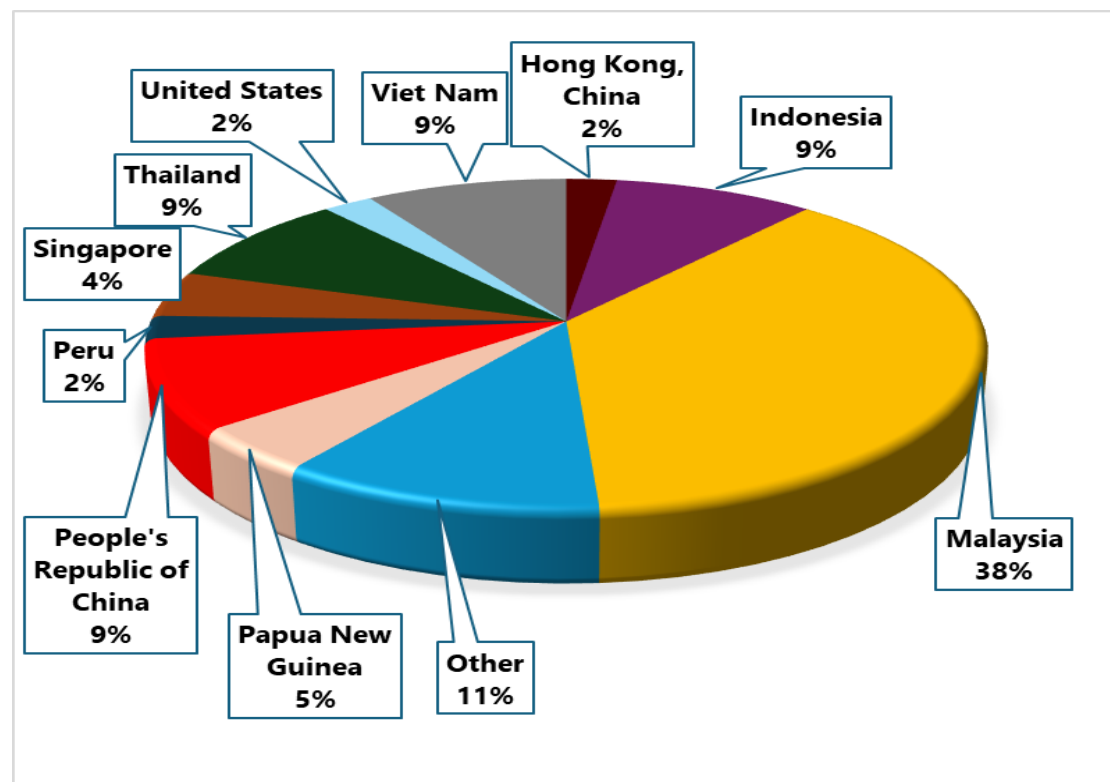


Annex. 2 – Survey Results

A survey was conducted during the workshop to ascertain the impact of the workshop's discussion points and knowledge acquired. This involved distribution of a survey amongst participants electronically. That is the survey questionnaire was prepared and hosted on the internet, as has been established that electronic survey is effective as non-electronic surveys¹. Furthermore, electronic surveys are also convenient for participants, especially when accessible via Quick Response (QR) code². In fact, surveys accessible via a QR code have been observed as having an increased response rate³. Therefore, the survey of this workshop was conducted electronically, with a QR code provided to workshop participants to complete the survey. The participants' data was anonymously collected to ensure confidentiality. The results of the survey are presented and summated below.

Participation in the Workshop



Annex. Figure 1. Workshop Participants Economy

¹ Van Selm, M., & Jankowski, N. W. (2006). Conducting Online Surveys. *Quality and Quantity*, 40(3), 435-456. <https://doi.org/10.1007/s11135-005-8081-8>

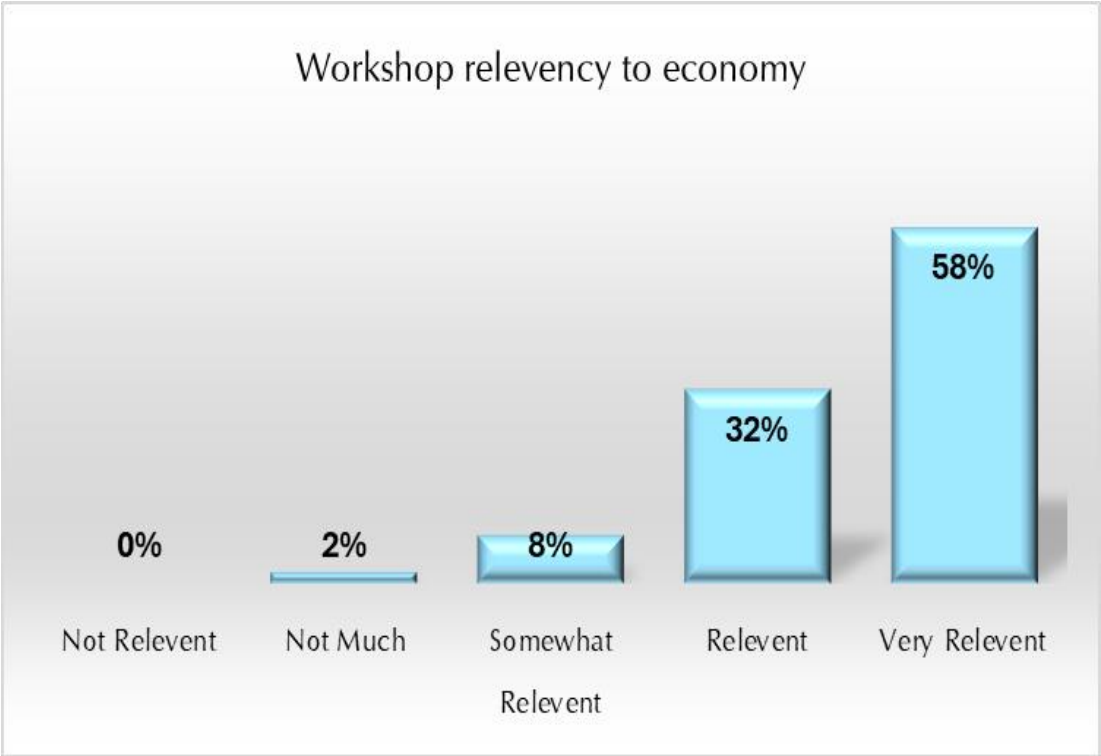
² Saunders, M. N. K., Lewis, P., & Thornhill, A. (2023). *Research Methods for Business Students* (9th Edition ed.). Pearson Education Limited.

³ Olson, K., & Ganshert, A. (2025). Remember, You Can Complete This Survey Online! Web Survey Links and QR Codes in a Mixed-Mode Web and Mail General Population Survey. *Social Science Computer Review*, 43(4), 827-849. <https://doi.org/10.1177/08944393241277553>

This workshop featured 58 participants from 13 economies i.e., 10 APEC economies and four non-APEC economies. About 60 percent of the participants were male, and 40 percent female. As illustrated by Annex. Figure 1, most of the workshop’s participants emanated from the host economy, Malaysia. This included key stakeholders from the energy industry of Malaysia, which is important as they are the decision makers and policy experts, showcasing the potential impact of this workshop toward industry practices and/or policy formulation. This workshop also generated participants from non-APEC economies with four non-APEC economies also participating and engaging in the discourse.

Relevancy of Workshop

The workshop was highly relevant to the 13 economies in attendance. Most of the participants highlighted that the discussion, agenda and itinerary of workshop was highly relevant to their economy. In fact, as illustrated by Annex. Figure 2, almost 60% of participants indicated that the workshop was very relevant to their economy.

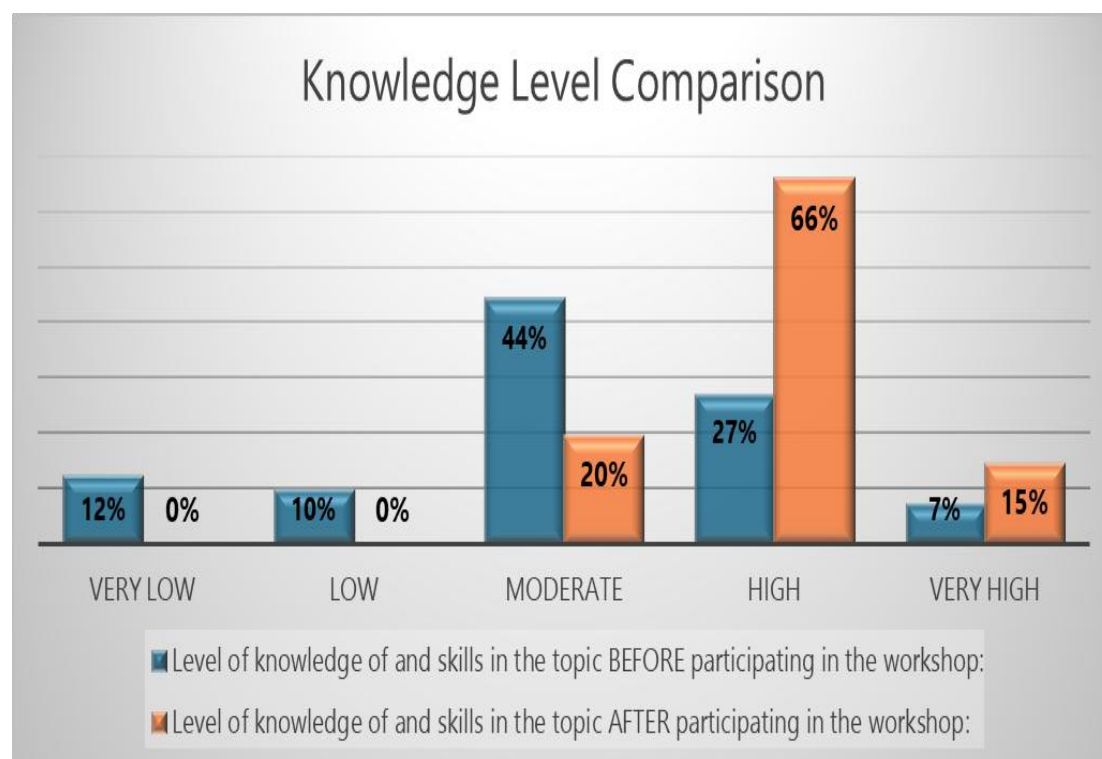


Annex. Figure 2. Relevance of workshop

This indicates that AI, big data and eco-innovation are highly relevant to the economies in attendance. Furthermore, participants commented that the workshop helps their economies to “deal with the need of development”, that their “economy & organization have net zero targets”, and their scientific “research is now focusing on sustainability matters”.

Knowledge Generated from Workshop

Furthermore, workshop participants were also asked to indicate their level of knowledge and skills on AI, big data, and eco-innovation for achieving carbon neutrality. That is, they were asked prior to rate their knowledge on the topic prior to them attending this workshop and compared it with their knowledge after attending this 2-day workshop. Annex. Figure 3 provides the responses from the workshop's participants.



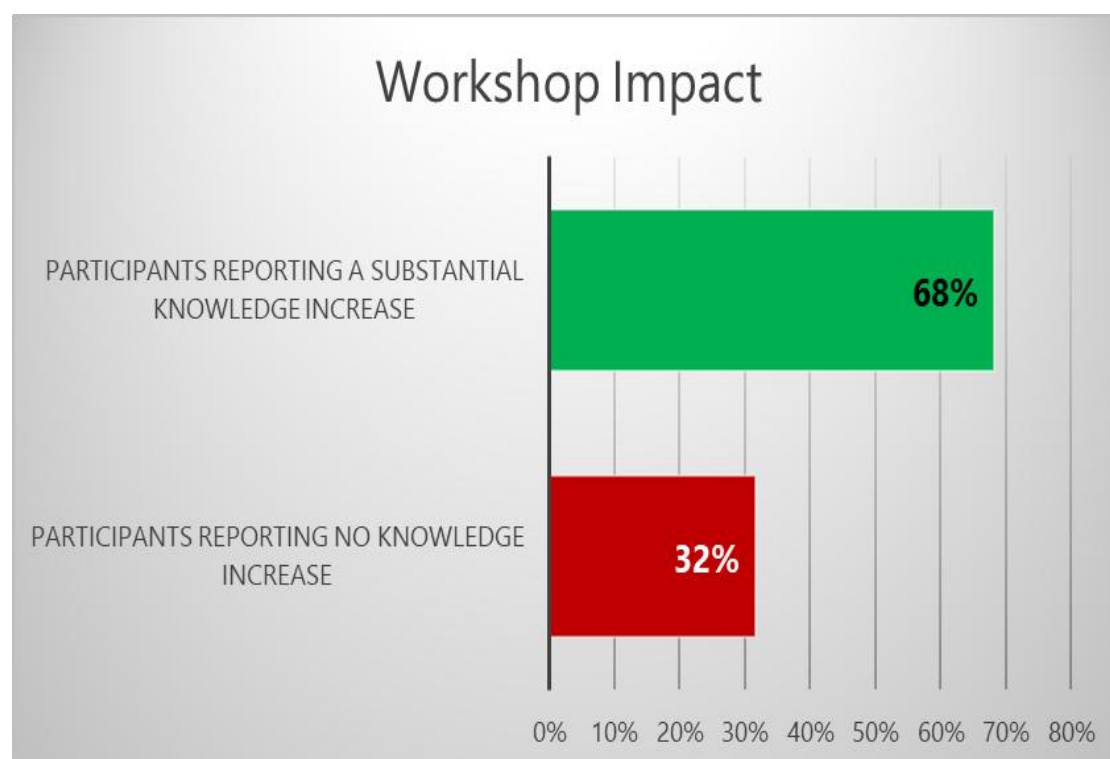
Annex. Figure 3. Participants Knowledge Levels on Topics Covered

Prior to the workshop, about 22 percent of the workshop participants had very low to low levels of knowledge and skills in AI, Big data and eco-innovation for achieving energy sector's carbon neutrality. Only 7 percent had very high knowledge of the topic prior to the workshop. The majority of participants, about 45 percent, had moderate knowledge prior to the workshop.

After attending all 2 days of the workshop, no participant indicated very low to low level of knowledge. In fact, 20 percent of the participants indicated that their level of knowledge and skills in the topic increased to moderate. The majority of participants, about 66 percent, indicated that they now had a high level of knowledge and skills in the topic. Meanwhile, 15 percent of participants registered a very high level of knowledge and skills after the workshop. Participants commented that “as participants, we are able to get new insight about eco-innovation and AI-Big Data”, “able to understand AI and Carbon Neutrality from each APEC member Economy” and that they are able “to explore how AI can help to achieve net zero”.

Impact of the Workshop

Overall, the impact of the 2-day workshop on participants knowledge and skills in the topic on AI, big data and eco-innovation for energy sector's carbon neutrality is summarized in Annex. Figure 4. The overall impact of this workshop saw 68 percent of participants reporting a substantial increase in their knowledge and skills in the topic.



Annex. Figure 4. The overall impact on participants' knowledge

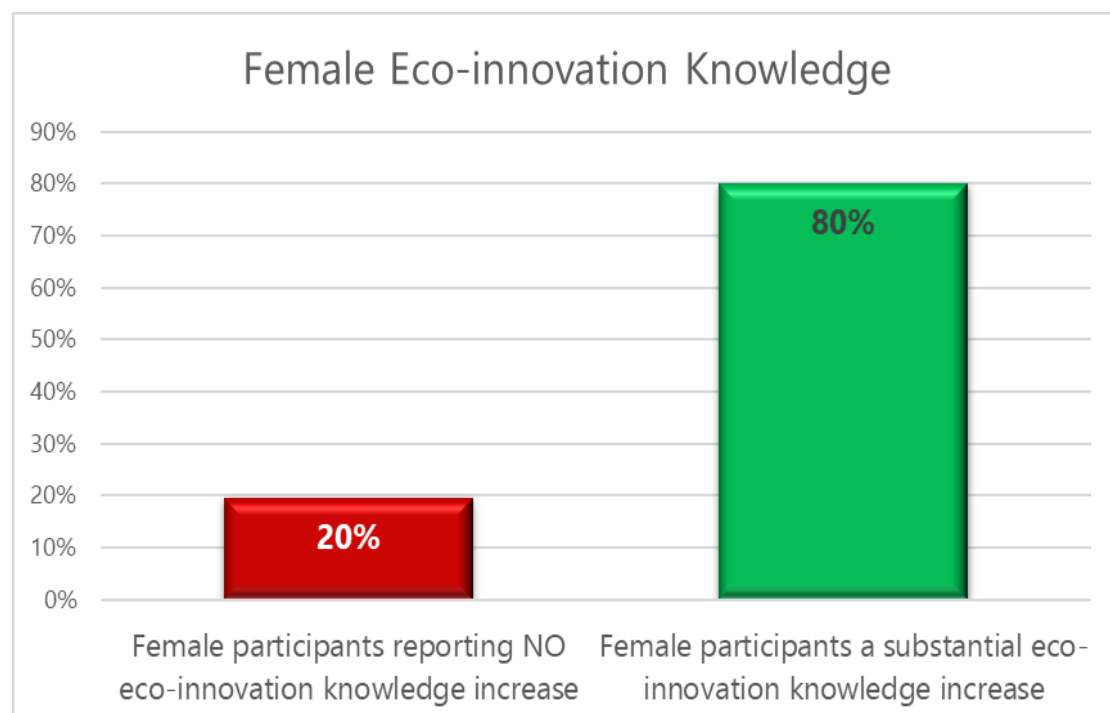
To further analyze the impact of this workshop, the participants were also asked to further elaborate on the specific knowledge and skills gained in the workshop. An excerpt of the specific comments from the participants are provided in Annex. Table 1.

Annex. Table 1. New skills and knowledge gained by participants of the workshop

What new skills and knowledge did you gain from this event?	
1.	"Energy outlook and new perspectives from APEC"
2.	"Knowledge about AI"
3.	"Energy supply mix resources across APEC"
4.	"The implementation of AI towards energy and carbon neutrality"
5.	"Solar, Geothermal, AI"

6.	"AI and big data"
7.	"Critical thinking skills"
8.	"Greater knowledge of Malaysia's energy situation; AI applications in energy"
9.	"Trilemma of energy security, energy affordability and energy sustainability, each is an independent of other and cannot be achieved without another"
10.	"Correlation between AI and Energy"
11.	"Greater understanding on AI Big Data and the connection with Eco Innovation"
12.	"Issues and challenges surrounding AI"
13.	"Latest updates on the ground"
14.	"Strategy for Energy development"
15.	"Gain knowledge in the potential of renewable which can be enhanced via AI"

In addition, this workshop also created impact on females. The majority of females participating in this workshop indicated a substantial increase in their knowledge on how AI and big data can support eco-innovation for carbon neutrality of APEC economies.



The 20 percent of females who did not report substantial knowledge increase is possibly due to them being researchers and subject matter experts in these areas as they indicated that their research is exploring these areas. Therefore, this workshop was impactful to the majority of participants, particularly for females.

Annex. 2 References

Olson, K., & Ganshert, A. (2025). Remember, You Can Complete This Survey Online! Web Survey Links and QR Codes in a Mixed-Mode Web and Mail General Population Survey. *Social Science Computer Review*, 43(4), 827-849. <https://doi.org/10.1177/08944393241277553>

Saunders, M. N. K., Lewis, P., & Thornhill, A. (2023). *Research Methods for Business Students* (9th Edition ed.). Pearson Education Limited.

Van Selm, M., & Jankowski, N. W. (2006). Conducting Online Surveys. *Quality and Quantity*, 40(3), 435-456. <https://doi.org/10.1007/s11135-005-8081-8>