



Asian Productivity Organization

**Annual Report**

2023



A large abstract graphic dominates the lower half of the cover. It features several lines of varying widths and colors (shades of orange, grey, and white) that converge towards the top center. At the top of these lines are small upward-pointing arrows, suggesting growth and progress.

Asian Productivity Organization  
**Annual Report**  
**2023**



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I am pleased to present the Annual Report of the Asian Productivity Organization (APO) for 2023. With support from the 65th APO Governing Body Meeting (GBM), the APO embarked on pivotal initiatives aimed at increasing the accountability, transparency, effectiveness, and impact of the organization. Balancing these institutional initiatives with the APO's heavy lineup of 112 multicountry projects, 69 in-country projects, 20 e-courses, and 37 Productivity Talks in 2023 has been demanding yet fulfilling. The APO was driven by the belief that these initiatives would lay a robust foundation for the APO's future in a rapidly shifting global productivity landscape by refining our strategic focus and enhancing operational effectiveness and efficiency.

This year, the APO prioritized internal improvements, implementing remedial actions to address five high-risk areas of the APO Secretariat identified by an independent third-party evaluation.



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The initiatives launched require continued diligence and support in 2024 and beyond to fully realize their benefits.

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This vital process was essential for aligning our internal controls with globally recognized standards, underscoring our ongoing commitment to transparency and effectiveness.

Throughout 2023, the APO also solidified its status as a respected international platform, engaging with global leaders to position productivity at the heart of policy planning, formulation, implementation, and review. This strategic engagement has bolstered the effectiveness of core programs such as the Specific National Program (SNP), Green Productivity (GP) 2.0, APO Accreditation Program, and Centers of Excellence (COE) and has enhanced our brand visibility, attracting new collaborators and enriching the quality and outreach of our programs. In response, we have updated our engagement strategy to convert these new collaborations into tangible programs and outcomes for our members.

Preparations for the APO Vision 2025: Pause-and-reflect Activity was a focal point in 2023, involving the Steering Committee, Technical Working Group, National Productivity Organizations, and Secretariat. The recommendations from this extensive planning are set to be implemented in

phases starting in June 2024. These measures are designed to prepare us for a seamless transition into our post-2025 vision and institutionalize monitoring and evaluation (M&E) activities.

As we reflect on these transformative efforts, unprecedented since the APO's inception in 1961, we are ushering in a revolutionary era for our organization. I extend my heartfelt gratitude to Directors and all APO members, whose unwavering support has been indispensable. However, it is too early to celebrate; the initiatives launched require continued diligence and support in 2024 and beyond to fully realize their benefits.

I invite government leaders, stakeholders, potential collaborators, and youth interested in productivity to explore this report and share our conviction that the APO remains a leader in enhancing productivity across the Asia-Pacific region and beyond. I look forward to continued engagement with APO members to shape our shared future.

**Dr. Indra Pradana Singawinata**  
Secretary-General

# 65th Session of the APO Governing Body

24-26 May 2023, Ulaanbaatar, Mongolia



## 65th Session of the APO Governing Body

24-26 May 2023,  
Ulaanbaatar, Mongolia

After three years of meeting virtually, the 65th Session of the Governing Body (GBM) was held in person 24-26 May 2023 in Ulaanbaatar, Mongolia.

APO Directors representing 19 member economies attended the session. The delegate from I.R. Iran was unable to attend. The meeting was also attended by observers representing the Association of Productivity Center of Kazakhstan and Pan African Productivity Association as well as presenters from Deloitte Touche Tohmatsu LLC, National Agriculture and Food Research Organization (NARO) of Japan, and Economic Policy Advisor to the President of Mongolia. APO Director for Mongolia Yamaaranz Erkhembayar delivered the Welcome Address, followed by the Inaugural Address by H.E. Byambasuren Urgamal, Vice Chief Cabinet Secretary, Government of Mongolia. Outgoing APO Chair and APO Director for Cambodia Phork Sovanrith opened the session.

The 65th GBM discussed and decided on several important matters:

- Adoption of the following reports: Annual Report of the Secretary-General; Financial Report for the Year 2022; Report of the 63rd Workshop Meeting of Heads of NPOs (WSM) to the Governing Body; and APO Revised Budget for 2024.
- In-principle approval of the APO Secretariat's Third-party Evaluation Report: Assessment of the APO Secretariat's Performance, Management, and Compliance submitted by Deloitte Touche Tohmatsu LLC after a revised report incorporating the deliberations of the 65th GBM obtained final approval of the Governing Body (GB) by circulation in July 2023.

- Endorsement of the following proposals: Revisions to Financial Regulations and Project Regulations; and Revisions to APO Regional and National Awards Conditions and Procedures. The proposal on the Utilization of Unappropriated Surplus was not approved, but the GB requested the Secretariat to deliberate further on the details at the 64th WSM to be held 17-19 October 2023 in Ankara, Turkiye.
- Endorsement/notation of the following progress reports: Recommendations of the Task Force on the Membership Contribution Formula; Recommendation on the APO Vision 2025 Monitoring and Evaluation to conduct a Pause-and-reflect Activity; Progress Report on Strengthening the APO's Digital Capability; and Updates on the APO Centers of Excellence (COE), Development of GP 2.0, and APO Accreditation Program.

Two special presentations were also delivered during the GBM. The first was on Boosting Productivity Growth in Mongolia by guest speaker Davaadalai Batsuuri, Economic Advisor to the President of Mongolia. The second explained the newest APO COE on Climate-smart Agriculture, NARO, by Dr. Satoshi Morita, Director-General, NARO Development Strategy Center. These were followed by the presentations of APO Directors on policy directives on the topic of "Emerging Needs for Productivity Enhancement."

Incoming APO Chair and APO Director for the ROC Sheng-Hsiung Hsu closed the session. The 65th GBM concluded with observational site visits to Chinggis Khaan Palace Camp and Khustai National Park.





# 64th Workshop Meeting of Heads of NPOs

17-19 October 2023,  
Ankara, Turkiye

The 64th Workshop Meeting of Heads of National Productivity Organizations (WSM) was held in Ankara, Turkiye, 17-19 October 2023.

It was attended by 39 NPO delegates and 26 advisers from 20 APO member economies, along with two observers from the Pan African Productivity Association. APO Director for Turkiye Abdullah Basar opened the session, followed by a statement by APO Secretary-General Dr. Indra Pradana Singawinata. H.E. Mehmet Fatih Kacir, Minister of Industry and Technology, Government of Turkiye, delivered the Inaugural Address.

The 64th WSM received the following reports and recommendations from the APO Secretariat:

- Evaluation of 2022 APO Projects;
- APO Vision 2025: Pause-and-reflect Activity;
- APO Liaison Officers' Meeting 2023;
- Strengthening the APO's Digital Capability;
- Utilization of Unappropriated Surplus (Executive Leadership Programs for NPOs and Establishment of a Fund for Nonmember Participation and Assistance); and
- Support for Local Implementation Costs of Multi-country Program Projects.

The meeting endorsed the above reports and recommendations, while three proposed programs under the Utilization of Unappropriated Surplus, i.e., Scholarships for Master's Degrees, Restructuring of APO Alumni Networks, and Study Missions to Non-members, were not endorsed.

Country paper presentations were also delivered. The presentations covered: 1) the relevance of the current design of APO programs related to multi-country training courses and workshops; 2) recommendations on new initiatives to strengthen the role of the APO as a think tank, catalyst, and regional adviser; and 3) recommendations on the implementation of APO programs with optimized involvement of NPOs and other networks and mechanisms.

The 64th WSM discussed and reconfirmed the APO Programs for 2024. It also preliminarily discussed the APO Programs for the 2025-26 Biennium.

APO Director for Turkiye Abdullah Basar closed the session in a statement delivered by APO Alternate Director for Turkiye Hulya Oztoprak Yilmaz. The 64th WSM concluded with a two-part program organized by the host country: 1) forums on "The Role of Model Factories in the Efficiency of Firms" and "Steering the Twin Transition: Sustainability and Efficiency of Startups;" and 2) Social Program.

# APO 2023 Projects at a Glance (2023 Data)



Individuals participating in APO projects (excluding training courses and e-courses)

17,939



Individuals trained (training courses and e-courses)

2,954

e-Courses developed in 2023



20

Total available e-courses in 2023: 87

Publications released in 2023



36



APO publication downloads

14,405

Average downloads per 2023 publication

109



P-Talk/Gemba series videos released in 2023

P-Talk: 30

P-Gemba: 7

P-Talk views

36,000+



Monthly average engagement rate on APO social media platforms

Facebook: 10.14%

LinkedIn: 7.53%

Twitter: 3.45%

YouTube: 5.53%



Active APO website users

English: 95,900

Japanese: 1,925 (June-December)

Individuals reached by APO promotional items



APO corporate video: 633 views (April-November)

GBM and WSM highlights: 566 views

APO Footprint brochure: 700 copies

Total: 1,899

Media citations of APO initiatives



2,519

Technical assistance (TES) projects for NPOs and other organizations



26

Newly established APO-accredited Certification Bodies in 2023



Productivity Specialist scheme CBs: 3

Green Productivity Specialist scheme CBs: 1

Total CBs operating in 2023: 7 (6 Productivity Specialist scheme CBs, 1 Green Productivity Specialist scheme CB)

APO Centers of Excellence (COE)



1

Total: 5 COE

National master plans/roadmaps developed through SNP (completed)

1

Total since 2018: 6



APO members with long-term productivity roadmaps assisted through SNP

4

Total since 2018: 6

Experts engaged in 2023



641

APO model companies/organizations developed/assisted through DMP (completed)

6

Total since 2021: 13



APO members establishing model companies/organizations

2

Total since 2021: 3

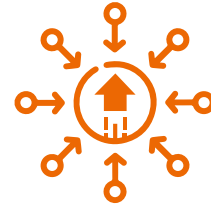


# Activity Report



# Centrality of Productivity

The Centrality of Productivity refers to the fundamental importance and pivotal role that productivity plays in the overall functioning and success of an individual, organization, or economy. This emphasizes the need for productivity to take center stage in any national development planning agenda, thus placing productivity in the driver's seat to propel socioeconomic development. Under this first focus area, APO projects are divided into three initiatives: Smart Transformation; Quality of the Workforce; and Green Productivity (GP). Overall, this focus area contributes toward ensuring sustained productivity growth among APO member economies.



**Top:** Workshop on IoT Applications in Livestock Management, Thailand  
**Middle:** Conference on Productivity and Green Growth: New Interlocking Paradigms, India  
**Bottom:** Workshop on the Green Tourism Certification Framework, Fiji

## Smart Transformation

The projects under Smart Transformation initiatives aim at enabling organizations in various sectors to transform their business models to become more competitive and productive through the introduction of new, innovative methods including advanced technology, tools, and techniques. In 2023, one conference, two study missions, five training courses, four workshops, and five e-courses under these initiatives were conducted. Additionally, three projects were funded by Special Cash Grants. Topics such as data analytics, IoT applications, new business platforms, and digital transformation were introduced and examined. Furthermore, to address the significant impact of the pandemic on the tourism industry, the APO explored initiatives to foster discussions on new technology for this sector.

## Quality of the Workforce

The second set of initiatives aims at enhancing the skills and competence of the workforce in member economies by ensuring that they have access to new knowledge and appropriate capacity enhancement tools. This includes initiatives to provide them with new skills or reskilling opportunities in line with new working styles and digital transformation. In 2023, six training courses, three workshops, one e-course, and one study mission were conducted under the Quality of the Workforce theme. Enhancing capacity building among professionals in NPOs through the development of productivity specialists in the manufacturing, service, agriculture, and public sectors continued under this initiative. In addition, the APO introduced future skills for employees in manufacturing, with reskilling for those in the service sector.

## Green Productivity

The third initiative under the Centrality of Productivity is GP. The projects focus on applications of GP methodologies, tools, and techniques in diverse sectors. To align with emerging environmental issues, GP-related topics have been expanded to address climate change, the circular economy, and environmental, social, and governance aspects. GP-related projects in 2023 included one conference, one training course, two workshops, one study mission, and one e-course. New topics such as ocean and plastic pollution, regenerative farming, green tourism certification, and green manufacturing were introduced.



# Innovation for Productivity

Innovation for productivity is about introducing impactful changes that lead to enhanced efficiency, reduced redundancy and waste, and improved productivity. It ensures that organizations in member economies remain competitive and adaptable in the rapidly changing environment. Under this focus area, projects address improving the ecosystem and regulation through innovative approaches and enhancing the innovation capabilities of organizations. There are two initiatives under this focus area: Robust Ecosystems and Regulatory Frameworks; and Innovation for Capability. Overall, this focus area advances initiatives that emphasize innovation as the key driver of productivity.



## Robust Ecosystems and Regulatory Frameworks

Under this initiative, 2023 project topics included regulatory review in the public sector, introducing innovative methods to increase efficiency, and sharing best practices of developing regulatory frameworks among members and nonmembers. Three training courses, three workshops, and one e-course were conducted in 2023.



## Innovation Capability

Enhancing organizational capacity and ability to foster innovation ecosystems requires a combination of various factors, including culture, leadership, resources, work processes, and knowledge. Organizations must embrace new ideas and be willing to take risks. Projects under Innovation Capability focus on promotion of an innovation culture, adoption of international standards on innovation, and introduction of new technologies to innovate business processes. In 2023, the APO conducted one conference, one training course, six workshops, one study mission, and one e-course under this initiative. Innovation systems in manufacturing, services, the public sector, and agriculture were examined. Two projects funded by Special Cash Grants in Sri Lanka and Vietnam were also implemented under this category.

**Left:** Training Course on Design and Evaluation of Innovation Policies, Philippines

**Right:** Training Course on Knowledge Transfer to Improve Agricultural Productivity, Bangladesh

# Inclusive Productivity

Overall, this focus area emphasizes broadening the social benefits of the productivity movement in each member economy. It promotes the importance of inclusive engagement and stresses the purposeful, proactive involvement of all segments of society. Under this focus area, projects aim to strengthen the development of SMEs; promote productivity enhancement among women, youth, and people with disabilities (PWDs); and introduce methods and tools for productivity gainsharing. Projects are categorized into three initiatives: SME Development; Broad-based Engagement; and Productivity Gainsharing.



• Above: Training Course on Service Quality Management in Retail, ROC  
 • Below: Workshop on Supporting Youth in Entrepreneurship, ROK



• Training Course on Productivity Gainsharing in Agribusiness Enterprises, Pakistan

## SME Development

SMEs are the major contributors to the economy in all members. However, their share of overall value added and productivity performance pale in comparison with those of larger enterprises. Hence, projects are designed to assist SMEs in enhancing their capabilities to cope with Industry 4.0, digital transformation, and globalization. In 2023, the APO conducted one conference, five training courses, two workshops, two e-courses, and two study missions for SMEs in manufacturing, services, and agriculture. Topics related to digitalization, service quality, supply chains, productivity measurement, and productive maintenance were shared with professionals involved in SME development. Topics on rural development, exploration of the creative economy, and role of millennials were also discussed under this category.

## Broad-based Engagement

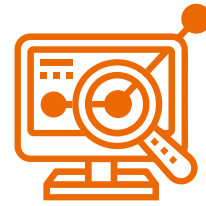
The Broad-based Engagement initiative is intended to encourage widespread participation in and commitment to the productivity movement for marginalized sectors in society including women, youth, and PWDs. Projects focus on productivity tools and related skills and knowledge to increase their participation in labor markets. Two conferences, two training courses, five workshops, one e-course, and one study mission were conducted in 2023. Projects covered topics including entrepreneurship, female leadership, employability in informal sectors, and policies for PWDs in the workplace.

## Productivity Gainsharing

Sharing the gains from productivity improvement goes together with inclusive engagement. It underlines commitment to ensuring that the gains are distributed equitably. This practice benefits not just individual workers but companies as well since productivity gainsharing is necessary to sustain employee commitment to increasing productivity. To effectively promote and disseminate insights on productivity gainsharing, the APO conducted one training course and several Productivity Talks on related topics in 2023.

## Regional Catalyst

Under the Regional Catalyst focus area, projects are designed to strengthen the APO's position as the leading organization on productivity and its key roles in serving member economies, while aiming to contribute to the first three focus areas outlined above and more broadly to the APO Vision 2025's three overarching goals. They include Accreditation and Certification, Centers of Excellence (COE), Digital Learning (DLN), and Research.



### Accreditation and Certification

The Accreditation and Certification Program seeks to elevate the role of NPOs from training providers to certification bodies (CBs) on productivity-related certification schemes; increase the number of certified productivity specialists in member economies; develop the standard of productivity specialists; and raise the APO's visibility as a leading productivity organization. The transformation of NPOs into CBs is expected to accelerate the development of competent productivity specialists across APO members who can contribute to productivity improvement in their countries. With four CBs accredited in 2023, a total of seven APO-accredited CBs has been established. The program focuses on developing, implementing, and reviewing all activities related to accreditation and certification; strengthening cooperation among CBs; exploring new opportunities; and complying with international standards. Two training courses and one workshop were conducted to strengthen CB operations and management systems.



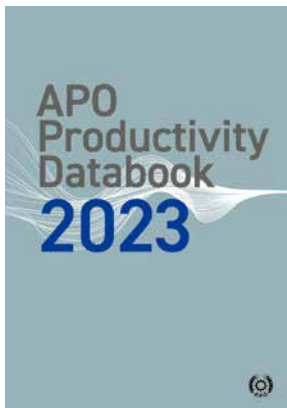
- Training Course for Assessors of the Productivity Specialists Certification Program, Pakistan

### Digital Learning

The DLN Program is an initiative by the APO to disseminate knowledge on productivity-related topics. In contrast to other Multicountry Programs, the DLN is also open for participation by individuals from nonmembers. This strengthens the reputation and raises the visibility of the APO. To intensify the DLN Program in 2023, 20 new e-courses were initiated. Fifteen e-courses were related to the industry, service, and public sectors, while five were on agriculture. In addition to the new courses, 67 existing courses on subjects still relevant and in demand were retained. Detailed information on the courses, number of registered participants, and number who passed the exams can be found in the Appendix.

The APO Productivity Talks (P-Talks) continued to be broadcast on the YouTube channel in 2023. Thirty sessions were organized, featuring 39 speakers from members and nonmembers. The P-Talk sessions had an average of 3,000+ views per month, and more than 4,800 YouTube subscribers had registered by the end of 2023.





••• APO Productivity Databook

### Research and Program Development

The third program under the Regional Catalyst focus area is Research and Program Development. Projects involve scanning and identifying emerging ideas and trends related to productivity in various sectors, analyzing the needs and requirements of members, and providing the basis for new program development. A total of 37 research projects covering emerging productivity issues were implemented. Of these, 17 were completed by the end of 2023, with the remaining 20 still in progress. The topics included the informal economy and productivity growth, premature deindustrialization and productivity performance, global supply chains and implications for productivity, agile working styles for productivity, agricultural productivity, strategic modeling for future agriculture, emerging trends in productivity, and development of new productivity tools in the agriculture and public sectors. The APO continued to conduct research on the productivity of members through productivity analysis, productivity outlooks, and the annual *APO Productivity Databook* project.

### Centers of Excellence

The APO COE Program fosters regional development by creating a platform for sharing successful productivity initiatives by acknowledging institutions exemplifying world-class competency in productivity enhancement. Five COE are now in operation, dedicated to Green Productivity, Smart Manufacturing, Public-sector Productivity, IT for Industry 4.0, and Climate-smart Agriculture (CSA), demonstrating the program’s commitment to both bolstering existing COE and identifying new areas of excellence. In 2023, the APO COE Program achieved significant milestones in advancing regional productivity. Noteworthy accomplishments included the establishment of the COE on CSA. Led by Japan’s NARO, the COE on CSA initiated projects focused on climate-change mitigation and adaptation technologies in agriculture, conducting a comprehensive need and readiness assessment survey, and hosting an International Conference on Climate-smart Agriculture. Plans for enhancing existing COE, particularly in public-sector productivity and IT for Industry 4.0, were outlined for implementation in 2024, intensifying efforts for continuous improvement and innovation in the region.



••• COE on Climate-smart Agriculture (CSA), National Agriculture and Food Research Organization (NARO)



## Strengthening of NPOs and Policy Advisory

Under the Strengthening of NPOs and Policy Advisory focus area, programs are designed to foster greater collaboration among NPOs and member economies and strengthen their capacities to formulate strategic changes for enhanced productivity and competitiveness. Similar to the Regional Catalyst focus area, this contributes to the first three focus areas and more broadly to meeting the three main goals of the APO Vision 2025.



### Bilateral Cooperation between NPOs

NPOs are the key productivity-promoting institutions in APO members. They must develop and strengthen the capacity to pursue their roles effectively and efficiently. The Bilateral Cooperation between NPOs (BCN) Program functions as a collaborative sharing and learning platform to leverage each other's strengths and build partnerships for mutual benefit among members.

The BCN Program encourages a collaborative approach to learning, drawing insights from diverse perspectives, views, and experiences. By facilitating exchanges among high-level officials of NPOs and policymakers, it serves as a platform for mutual learning and sharing best practices in areas related to productivity. This program aims to leverage the strengths of APO members, fostering partnerships for mutual benefit and stimulating innovative ideas to address current productivity needs. The anticipated outcomes include not only the initiation of follow-up collaborations but also the reinforcement of a cooperative spirit among members. Additionally, proactive proposals for BCN projects by the APO Secretariat seek to promote broader cooperation, with implementation guided by centralized coordination and arrangements between sending and hosting NPOs.

In 2023, nine BCN projects were implemented in the face-to-face modality, with the FTPI and SGPC hosting two each, and one each hosted by the CPC, MPC, MPO, NTPC, and VNPI. The wide range of topics included certification bodies, digitalization, smart services for the elderly industry, green growth, innovation, quality awards, strategic foresight, and others. Two MOU were signed for long-term collaboration between the visiting and hosting NPOs, and others were under development. A total of 39 participants joined BCN projects. They were expected to be involved in the long-term collaboration between NPOs based on their learning in BCN activities.



**Above:** Bilateral Cooperation between NPOs on Productivity Enhancement for SMEs and Organizational Best Practices of Productivity-promoting Institutions from Nepal to Mongolia

**Below:** Bilateral Cooperation between NPOs on Public-sector Excellence and Performance Evaluation from Mongolia to the Philippines

## Individual-country Observational Study Missions

The diverse, unique strengths of APO members create the potential for collaboration and mutual benefit. The Individual-country Observational Study Mission (IOSM) Program offers opportunities for members to leverage each other's strengths, inspiring and guiding the development of strategies, policies, and action plans for new initiatives or evolving ideas crucial for development.

The IOSM Program enables mutual learning and the exchange of best practices among members by supporting study visits for a wide range of participants. It also facilitates in-depth discussions on various topics, including current productivity issues, effective private-sector strategies and policies, and essential success factors in implementing innovative nationwide initiatives. This aims at addressing the specific needs of each APO member, improving productivity enhancement practices, and fostering greater collaboration between sending and hosting members.

The 2023 IOSM Program had the most projects in the past 19 years, with 12 missions held in the F2F modality. It benefited 109 participants from nine members and engaged 17 local resource persons who shared experience and insights on various topics including public-sector productivity; Green Productivity; Industry 4.0 in SMEs; industrial policies and practices; environment, social, and governance (ESG) initiatives; R&D; Good Regulatory Practices

(GRP); fruit, gem, and jewelry industries; smart factory transformation; innovation management; and productivity-linked wage systems (PLWS). Some APO members participated in this program for the first time, indicating the ever-increasing interest of APO economies in this initiative.



Best Practices in Public-sector Productivity, Japan

## Certification Body Development

The Certification Body Development Program guides NPOs or partner organizations in complying with the requirements and standards of APO accreditation procedures. The program is conducted through consultancy and training on the scope of accreditation, certification process, internal auditing, and standard operating procedures. It ensures that participating NPOs or their partners are able to meet the requirements of the APO Accreditation Body. In 2023, a total of four NPOs in member economies received accreditation to operate as CBs. The newly accredited CB were the NPOs of India, Indonesia, I.R. Iran, and Pakistan. With those additions, seven APO-accredited CBs are now operating including those of Malaysia, Mongolia, and Vietnam. Another five NPOs are in the process of becoming APO-accredited CBs.

## Specific National Program

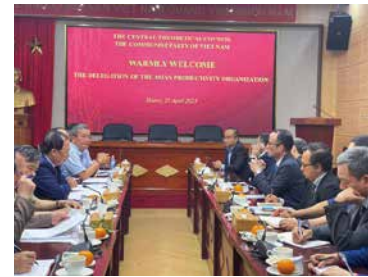
The APO's Specific National Program (SNP) endeavors to integrate productivity enhancement into the developmental priorities of member economies and underscores the pivotal role of productivity in their policy frameworks. This program offers customized support for the formulation of national productivity master plans and institutional development plans for NPOs, encompassing sectoral productivity considerations. The SNP is dedicated to fortifying the institutional facets of the productivity movement. In 2023, one SNP on the Institutional Capacity Development Plan for the VNPI was completed. Concurrently, the newly initiated Development of a Monitoring and Evaluation Framework of the National Productivity Master Plan for Bangladesh, the Development of Sri Lanka's National Productivity Master Plan, and the Development of Innovation Management Policy Framework for MSMEs in the Philippines were ongoing, with completion targeted for 2024.

## Technical Expert Services

The Technical Expert Services (TES) Program serves as the primary vehicle for the APO to enhance the institutional capacities of NPOs. Its core mission involves elevating the technical knowledge and competencies of NPO staff and productivity practitioners. This is achieved through meticulously tailored, intensive interventions delivered by assigned experts and specialists, who offer their expertise to requesting members.

An ongoing objective of the TES Program is to continually augment the critical mass of productivity practitioners while ensuring that their knowledge of emerging productivity tools and techniques within member economies remains current. Addressing the specific requests and needs of each APO member, the TES Program, in conjunction with other in-country projects, strives to propel national productivity improvement by providing practical, real-world solutions to challenges.

TES activities in 2023 were delivered virtually and face-to-face depending on the needs of NPOs. Twenty-six TES projects for 14 APO members were implemented, facilitated by 44 resource persons. The most common topic requested was productivity tools and techniques, including emerging ones such as Industry 4.0 and blockchains. The Philippines implemented four projects, while Turkiye and Vietnam implemented three each. Based on information from NPOs, a total of 9,255 participants benefited from TES implementation in 2023.



..... Institutional Capacity Development Plan for the Vietnam National Productivity Institute, Vietnam



..... Innovative Beekeeping Practices for Sustainable Apiculture, Nepal



### Development of Demonstration Companies

The APO Development of Demonstration Companies (DMP) Program gives members insights into the practical application of skills and in-depth understanding of productivity concepts, tools, and technologies across various sectors. By showcasing best practices and success stories in the initiation and execution of productivity improvement endeavors, the DMP Program serves as a conduit for disseminating valuable insights to a broader audience. This initiative contributes significantly to cultivating productivity practitioners who share their acquired knowledge to bolster national productivity movements.



Productivity Improvement in Energy and Mining Sectors through Knowledge Management for Mongolia, Mongolia

Demonstration companies and organizations function as catalysts by actively disseminating their experience and knowledge. This program allows NPOs to enhance their proficiency in steering demonstration/model initiatives through active participation in all phases of DMP projects. The impact of the program on overall productivity improvement within the implementing member and beyond stems from the continual dissemination of the experience of successful model companies and organizations.

In 2023, one DMP project was implemented by the MPO in the hybrid modality and completed in November. It involved three demonstration companies on Productivity Improvement in Energy and Mining Sectors through Knowledge Management (KM). The demonstration companies learned about KM tools for increased productivity from a resource person from Malaysia. All three companies were certified as APO demonstration companies and expected to share their learning and experiences with companies/organizations in Mongolia and other APO member economies. In addition, three DMP projects were newly started in 2023, hosted by Bangladesh, Pakistan, and Sri Lanka and involving 11 companies.

### APO Vision 2025 Outreach Program

The APO Vision 2025 is meant to achieve “inclusive, innovation-led productivity growth in Asia and the Pacific.” This involves specific goals, key result areas, and deliverables, which are translated into program areas and annual project lineups to ensure that APO activities are aligned with the intent and direction of the vision.

The APO Vision 2025 Outreach (VSN) Program was launched in 2022 to enable members to proactively disseminate information on the vision goals and engage all stakeholders in achieving them. Financial support of up to USD25,000 per year is provided to each APO member to cover activities under two biennial themes for 2022 to 2025: 1) Innovations for Higher Quality (2022–23); and 2) Inclusive Productivity (2024–25).



••• Lao Productivity Festival

Maintaining the momentum from the previous year, the 2023 VSN Program was implemented through innovative, impactful activities. By 31 December, seven of 18 participating members had successfully completed VSN activities and submitted the final reports. So far, 25 public events have been implemented successfully, which involved 81 resource persons, 7,309 participants, and the production and distribution of 142,106 promotional materials (videos, brochures, posters, flyers, notebooks, etc.) and publications. Some activities received notably high attention from the public such as the Productivity Roadshow 2023, Productivity Youth Camp, and Productivity Webtoon for Youth (Thailand); Conference on Innovation for Higher Productivity and Workshop on Sustained Productivity Growth (Bangladesh); and Lao National Productivity Festival (Lao PDR). The figures are expected to surge after the full completion by participating members, promising more profound effects ahead.

### National Award Program

The APO Award Program recognizes individuals with outstanding achievements and contributions in the area of productivity at national and regional levels. Introduced more than four decades ago, the awards were reshaped in 2021 to allow NPOs to confer awards annually to increase their recognition within member economies as the main bodies for productivity promotion and enhancement. In 2023, India, I.R. Iran, Mongolia, and Sri Lanka conducted the National Awards, recognizing seven individuals. The APO Secretariat continues to support the program by providing technical assistance in preparation for and conferment of the awards by NPOs.



••• APO National Award Recipients in India

## Institutional Programs

### APO Project Monitoring and Evaluation: Pause-and-reflect Activity

Acknowledging the existing gaps that still needed to be addressed to ensure the effective, efficient operationalization of the APO Vision 2025 monitoring and evaluation (M&E) framework, the Secretariat proposed a “pause-and-reflect activity” in lieu of a midterm evaluation. The 65th Session of the APO Governing Body (GBM) in May 2023 approved the APO Vision 2025: Pause-and-reflect Activity. It comprises a series of activities involving key APO stakeholders such as the GBM, Workshop Meeting of Heads of NPOs (WSM), and APO Secretariat. In addition, it involves mechanisms put in place previously to develop the APO Vision 2025, i.e., the Technical Working Group (TWG) and Steering Committee. The TWG comprised five productivity experts from Malaysia, Pakistan, the Philippines, Singapore, and the UK and one M&E expert from the USA. Its main scope of work was providing recommendations on enhancing the implementation of the vision’s current M&E framework. Comprising APO Directors/Acting APO Directors from Bangladesh, Cambodia, the ROC, India, Pakistan, Thailand, and Turkiye and the APO Secretary-General, the Steering Committee represented the Governing Body (GB) in the APO Vision 2025: Pause-and-reflect Activity deliberations and consultations. It provided strategic directions and final endorsement of the recommendations for the consideration of the 66th GBM.

The TWG conducted two online meetings on 1 and 31 August 2023. Those meetings put forward preliminary recommendations, which were submitted to the 64th WSM in Ankara, Turkiye, 17–19 October. The TWG recommendations focused on addressing the findings on the strategic and operational M&E levels of the vision. For the strategic level, while it was not recommended that the APO introduce major changes in the vision’s three high-level goals and their corresponding key result areas (KRAs) in the remaining years, clarifications were made on data availability related to high-level indicators and the extent to which APO programming contributed to achieving them. On the other hand, at the operational level, recommendations focused on enhancement of relevant tools, systems, and processes for data collection on the proposed outcomes, which were expected to: 1) facilitate the tracking and reporting of progress and achievements of the proposed adjusted results; 2) assist in impact evaluations; and 3) inform program planning and decision-making.

The recommendations offered suggestions for improvements, which could begin immediately and inform preparations for the post-2025 visioning exercise. The preliminary recommendations were endorsed by the 64th WSM for further deliberations of the Steering Committee in March 2024 and consideration and approval by the 66th GBM in May 2024.





## »» Evaluation of 2022 Projects



Project evaluation aids the understanding and analysis of the contributions of APO projects and programs to the achievement of the APO Vision 2025 goals. At the operational monitoring and evaluation (M&E) level, it measures the extent to which APO projects are relevant, effective, and efficient in their implementation. It informs planning, cultivates organizational learning, and provides accountability.

The report on the evaluation of 2022 projects was endorsed by the 64th WSM in Ankara, Türkiye, 17–19 October 2023, for submission to the 66th GBM in May 2024.

## »» Limitations of the Report

The APO Secretariat assessed each project covered in the report at the end of implementation. A postproject survey/feedback form was provided on the Qualtrics platform and on the e-learning platform for self-learning e-courses. The survey/feedback questions were limited to determining the degree to which participants found the capacity-building initiatives relevant to their work, focusing only on certain aspects of the evaluation criteria as outlined above. Thus, the analysis of the relevance, effectiveness, and efficiency criteria was limited to assessing the “level of reaction” to project implementation. For the Qualtrics-administered survey, the questions were designed for: 1) participants; 2) resource persons; 3) representatives of implementing organizations; and 4) APO officers in charge. The survey consisted of closed and open-ended questions. For the feedback forms completed after e-learning courses, the questions were directed only to participants and limited to the relevance to their work, usefulness of the site, and overall impression of the learning experience.

## ▶▶ Projects Covered

The projects covered in the evaluation report were limited to those with training and learning aspects and where corresponding assessments could be determined using the existing survey tool. These included: 1) multicountry projects; 2) self-learning e-courses; and 3) in-country projects, including Bilateral Cooperation between NPOs (BCN), Demonstration Company Projects (DMP), Individual Observational Study Missions (IOSMs), and Technical Expert Services (TES). The following projects were excluded from the evaluation report: Research, Accreditation, and Certification; Centers of Excellence; in-country projects such as Certification Body Development, Specific National Program for APO Members (SNP), APO Vision 2025 Outreach Program, and APO Award Program; and projects supported by Special Cash Grants. Table 1 provides a summary of projects covered in the report.

*Table 1. Summary of projects covered in the evaluation report*

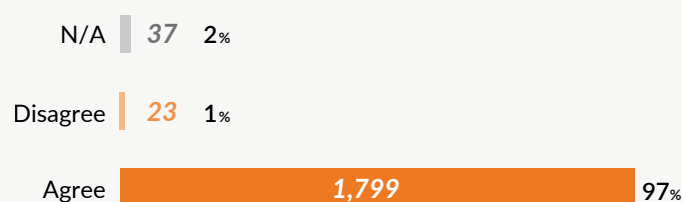
Project Category	No. of Projects	No. of Beneficiaries	No. of Resource Persons Engaged
Multicountry projects	55	2,061	208
Self-learning e-courses	67	4,427	85
In-country projects	38	1,201	41
Total	160	7,689	334

## ▶▶ Key Evaluation Findings

### **Relevance: Responding to the needs of intended beneficiaries**

At the level of individual participants, the postproject survey results gave favorable feedback in relation to matching project design with their needs. As shown in Figure 1, about 97% of multicountry project respondents found the projects timely and useful to their work. Some feedback in response to the open-ended questions suggested how project topics could be more contextualized to national needs. This indicated that the design of regional projects could be adjusted.

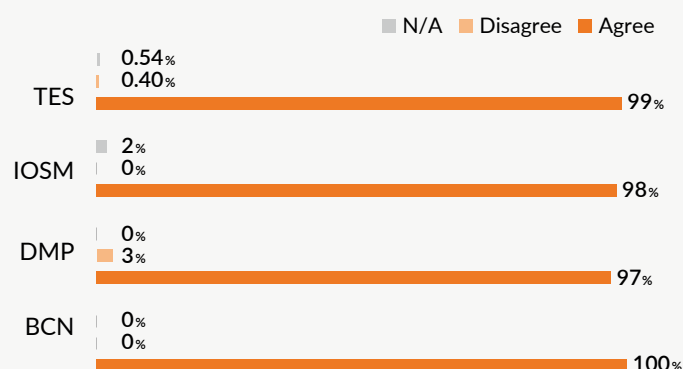
*Figure 1. Summary of multicountry project participants' responses to relevance-related questions*





Similarly, as shown in Figure 2, results for in-country projects revealed an equally high percentage of favorability, with BCN project participants unanimously agreeing that the projects were timely and useful. The positive feedback was supported by individual narratives related to appropriate selection of participants, with one IOSM project indicating a balanced representation of “high-end and low-end industries.”

Figure 2. Summary of in-country project participants' responses to relevance-related questions

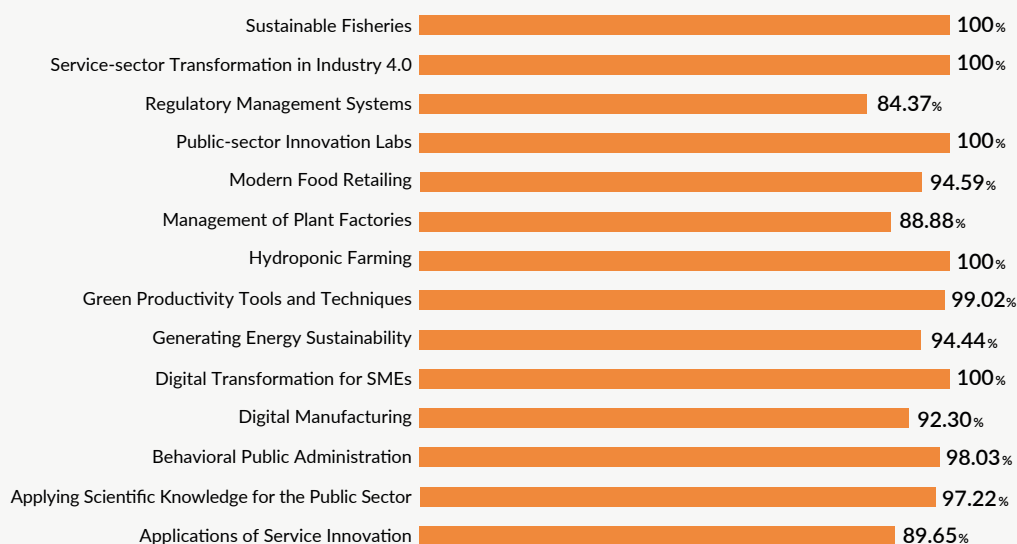


### Relevance: Leveraging the potential multiplier effects of digital-learning platforms in learners' workplaces

The 14 new e-courses offered in 2022 received a 96% favorability rating (Figure 3), with five rated as the most relevant: Digital Transformation for SMEs; Hydroponic Farming; Public-sector Innovation Labs; Service-sector Transformation in Industry 4.0; and Sustainable Fisheries. Participants were motivated to gain new productivity insights, concepts, and skills rather than addressing specific institutional capacity gaps or challenges in productivity.

Figure 3. e-Course learners' responses to relevance-related questions

#### Will apply this learning at my workplace



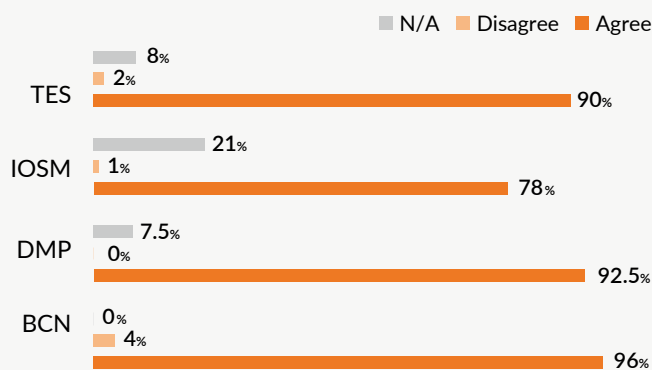
**Effectiveness: Facilitating change through mixed learning methods**

In the evaluation of projects with mixed learning methods, measures of effectiveness scored high but relatively lower than the relevance and efficiency criteria (as described in the next set of findings on “efficiency”). As seen in Figures 4 and 5, multicountry projects received an 88% favorability rating in terms of the learning methods used, i.e., presentations, discussions, case studies, country reports, and field (virtual) visits. For in-country projects, IOSMs received relatively lower favorable feedback at 78% compared with other in-country programs. The comments received were varied, although the general sentiment favored the F2F modality to maximize the advantages of the learning methods and approaches, in particular site visits. Also, a solid 100% agreed that site visits in the F2F modality enhanced their understanding of the topic. Conversely, 5% did not appreciate virtual site visits, and 20% did not provide any response.

Figure 4. Summary of multicountry project participants’ responses to effectiveness-related questions



Figure 5. Summary of in-country project participants’ responses to effectiveness-related questions

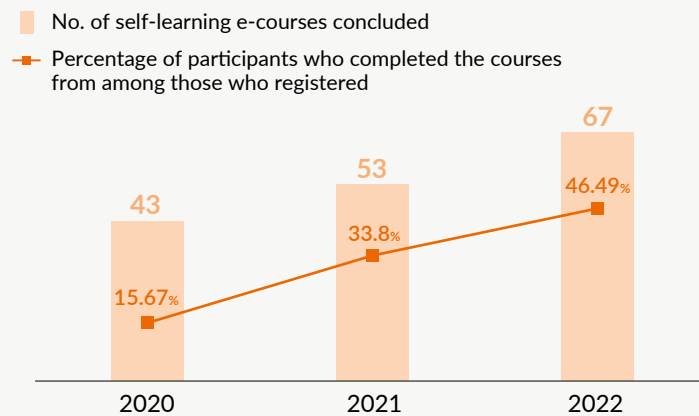


### Effectiveness: Affording flexibility to learn at one's own pace

Applying the strategy of flexible learning has proved to be valuable thus far. While flexibility could also pose some challenges in relation to learners' commitment to completing the courses, results for the 2022 e-courses showed a steady positive trend in the completion rates. As shown in Figure 6, the completion rate rose to 46% from about 34% in 2021.

Similarly, the dropout rate was reduced from 66% in 2021 to 53% in 2022. The dropout rate for APO members was lower than that for nonmembers. The extent of knowledge and skills gained from the e-courses was assessed through a customized quiz for each. The results directly determined whether the learners would pass or fail the e-course, with 70% set as the passing mark.

Figure 6. Completion rate in self-learning e-courses



### Efficiency: Maximizing resource persons' expertise

Multicountry projects were perceived as "efficient" in relation to how well the activities were organized and delivered by the resource persons to achieve the intended objectives. As shown in Figure 7, multicountry projects scored a 95% favorability rating in terms of the efficiency parameters covered by the postproject survey form. On the other hand, in-country projects demonstrated a consistent result of above 90%, with DMP projects garnering the highest score of 98%.

Figure 7. Summary of multicountry project participants' responses to efficiency-related questions

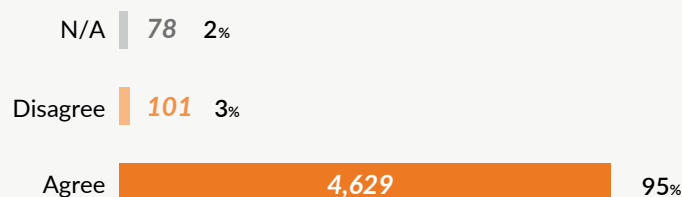
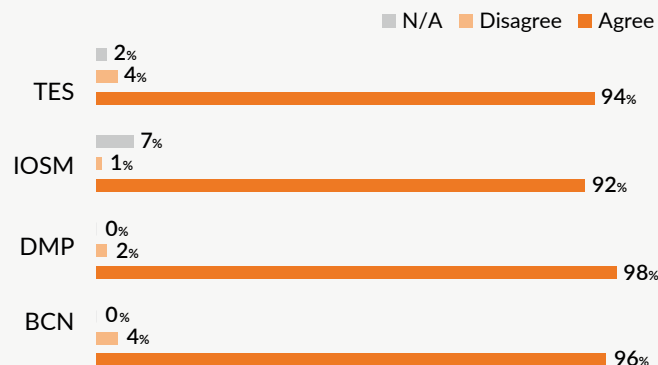


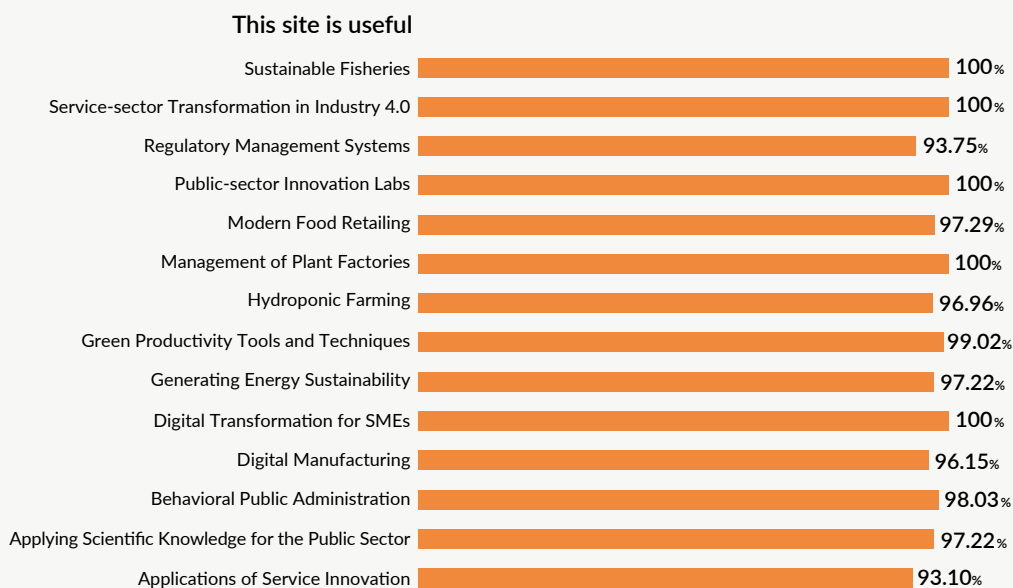
Figure 8. Summary of in-country project participants' responses to efficiency-related questions



The findings on the efficient delivery of APO capacity-building initiatives were dependent on the quality of resource persons (Figure 8). In general, feedback on the resource persons revolved around commending their expertise and abilities to create a conducive learning atmosphere. However, a few participants in multicountry projects also noted how tapping practitioners from the field as resource persons, e.g., policymakers and sector-specific organizations (perhaps similar to DMP projects), could aid more practical knowledge transfers. On the part of the implementing organizations and even resource persons themselves, maximizing resource persons' expertise could be explored through follow-up technical assistance. A few resource persons also indicated their interest in learning about participants' feedback to enhance implementation of projects of a similar nature.

For self-learning e-courses, efficiency was measured through learners' perception of the utility of the site or digital platform. Following the self-paced learning approach, the ability of the learning platform to provide accessible, timely assistance through its content was deemed crucial. As shown in Figure 9, the feedback was again overwhelmingly favorable, with five courses receiving a 100% rating.

Figure 9. e-Course learners' responses to the efficiency-related question



## » Key Recommendations

The key recommendations from the feedback mechanisms are summarized below.

Recommendation	Concerned APO Stakeholder
<p>1. The vetting process could be enhanced by maximizing the data that the existing Participant Form could request. There are relevant sections in the form that could facilitate the planning, monitoring, and evaluation of projects and programs. If collected and processed systematically and regularly, data could inform the project cycle from planning to monitoring and evaluation.</p> <ul style="list-style-type: none"> <li>• Section H. Participation in Other APO Projects (last 5 years only)</li> <li>• Section I. Actions Taken after Previous Participation</li> <li>• Section J. Objective for Participation</li> <li>• Section K. Tentative Action Plan for Postproject Follow-up</li> </ul>	<p>APO Secretariat and NPOs</p>
<p>2. In relation to the relevance criterion, there could be more effort to formulate project objectives as more result focused and whenever appropriate create opportunities to follow up multicountry initiatives with in-country projects or even vice versa. This could potentially bridge project contributions beyond the level of individual participants to more institutional changes. Related to recommendation 1, this comprehensive approach could be facilitated by introducing specific standard outputs such as participants' action plans or equivalents, which then could facilitate the achievement of the desired outcomes. More rigorous M&amp;E of the outcomes, in collaboration with implementing organizations, would be needed to demonstrate the contributions and achievements and inform planning of future projects.</p> <p>Each program may necessitate a different M&amp;E plan. For the projects covered in this evaluation report related to training and related capacity-building activities, the APO Secretariat, in collaboration with NPOs, may consider the Kirkpatrick model for project M&amp;E. Refer to Annex 3 for the model.</p>	<p>APO Secretariat to propose adjustments in the M&amp;E guidelines and policies, including relevant templates capturing project results such as Project Notifications and Project Reports</p> <p>APO Secretariat and NPOs to undertake M&amp;E activities if adopted</p>
<p>3. In the interest of efficiency and cost-effectiveness, it could be beneficial to assess how multicountry training courses and self-learning e-courses were implemented and how they could mutually complement or amplify contributions. The recommendations could be incorporated in the current practice of undertaking impact studies by an external party every two years.</p>	<p>APO Secretariat</p>
<p>4. To strengthen the design of projects and address the criteria of relevance, effectiveness, and efficiency, APO projects could incorporate sustainability approaches and risk analysis in their design. Even while short-term and mostly one-off activities, these could reflect project assumptions and how change is envisioned to occur. Enhancing project design could also prompt actions during implementation, especially if the project assumptions no longer hold true.</p>	<p>APO Secretariat to propose adjustments in M&amp;E guidelines and policies, including relevant templates capturing project results such as Project Notifications and Project Reports</p> <p>APO Secretariat and NPOs to undertake M&amp;E activities if adopted</p>

### **Independent Evaluation of the APO Secretariat's Performance, Management, and Compliance by a Third Party**

Upon the approval by the 64th Session of the APO Governing Body (GBM) in 2022 of the introduction of an independent evaluation system by a third party on an annual basis with the objective of enhancing the transparency, accountability, integrity, and effectiveness of the Secretariat's activities, the first cycle of independent evaluation was conducted starting from January 2023. The Third-party Evaluation Report: Assessment of APO Secretariat's Performance, Management, and Compliance was submitted and discussed at the 65th GBM in May 2023, with approval announced in August 2023.

The first cycle of the independent evaluation assessed the effectiveness of the internal control system of five APO Secretariat business processes: 1) general management; 2) human resources and general affairs; 3) accounting; 4) procurement; and 5) program management. In its final version, the evaluation report presented 20 findings of weaknesses to be resolved and two observations, which are points for improvement for which remediation actions would be recommended but not mandatory. Among the 20 findings, five areas were categorized as priorities in the design of internal controls, while 12 were categorized as medium priority and three as low.

In response to the evaluation report, the Secretariat prepared an Implementation Plan for Remediation Actions to Improve the APO Secretariat's Performance, Management, and Compliance: Introduction of an Independent Evaluation System by a Third Party with the focus on the five high-risk areas of 1) a whistleblowing system, 2) IT security, 3) authority to approve purchases, 4) management of policies and procedures, and 5) policies and procedures library in view of the limitation of Secretariat resources to cover all findings simultaneously. The Governing Body (GB) approved the plan in August 2023, and the Secretariat started undertaking actions addressing the five high-risk areas.

The implementation plan includes a commitment to conducting a second cycle of independent evaluation of the APO Secretariat's performance, management, and compliance by a third party as decided by the 64th GBM. The second cycle of independent evaluation of the APO Secretariat's performance, management, and compliance by a third party was developed. Upon its approval by the GB by circulation, the selection of a vendor for the second cycle of independent evaluation was processed and finalized in December. The second cycle is expected to commence in early 2024.

## Public Relations

The Digital Information Unit (DIU) of the APO Secretariat oversees activities and initiatives under the Public Relations (PR) Program to enhance the visibility of the APO among key stakeholders and strengthen its brand as the leading organization in the productivity domain. This includes proactive initiatives to disseminate information about APO programs and activities via online platforms, such as the APO website and social media accounts. The PR Program plays a crucial role in maintaining networks with APO members, international organizations, and the broader public by serving as a clearinghouse for productivity information.

In 2023, the DIU adopted a multifaceted approach to engage the audience and promote awareness and understanding of the APO and its initiatives. This included employing various forms of strategies across different available channels.

## Website

The main APO website remains the principal channel for disseminating information, featuring regular updates on APO activities, projects, stakeholder engagement, and publications. In 2023, with over 120 APO project-related articles published, it received an average of 8,000 monthly active visitors, culminating in a total of 95,900 active visitors as of 31 December 2023.





With the APO Secretariat based in Tokyo, Japan, a strategic decision was made to have a localized website to effectively engage with the Japanese audience. This microsite was developed and launched in June 2023 and averages 200 active visitors monthly.



### **Media Engagement**

Media engagement primarily involves distributing press releases covering significant APO events like the annual Governing Body Meeting (GBM), Workshop Meeting of Heads of NPOs (WSM), launch of new initiatives, and high-level meetings with dignitaries. Six press releases were distributed online in 2023 covering the following events: 1) launch of a new Center of Excellence on Climate-smart Agriculture in March; 2) meeting with Vietnam's Prime Minister in May; 3) 65th Session of the APO GBM in May; 4) 64th WSM in October; 5) meeting with Lao PDR's Deputy Prime Minister and Minister of Industry and Commerce in November; and 6) launch of the *APO Productivity Databook 2023* in December. Secretary-General Dr. Indra Pradana Singawinata accepted several media interviews during his official missions to APO members including the 65th GBM in Mongolia and 64th WSM in Turkiye.

To enhance the monitoring and reporting of the DIU's outreach efforts, a media monitoring system by Meltwater was set up in June 2023. There was a total of 2,320 media citations recorded for the year, which was an increase from 900 in 2022.

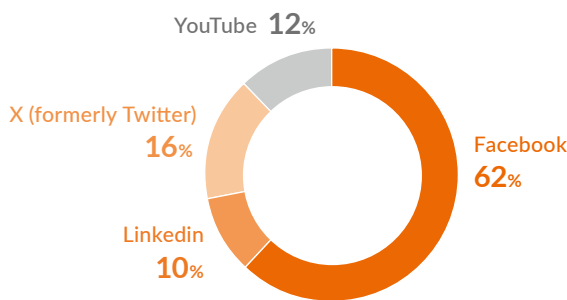


### Social Media

The APO has four active social media accounts, Facebook, LinkedIn, X (formerly known as Twitter), and YouTube, with a total of 41,000 followers/subscribers in 2023 (Figure 10).

A six-month social media campaign, running from May to November 2023, was part of the APO’s PR strategy to engage the public and promote understanding of its mission. This campaign featured 12 visually engaging posts on the APO and its initiatives. This resulted in an increase in engagement rates on Facebook and LinkedIn by 36% and 28%, respectively.

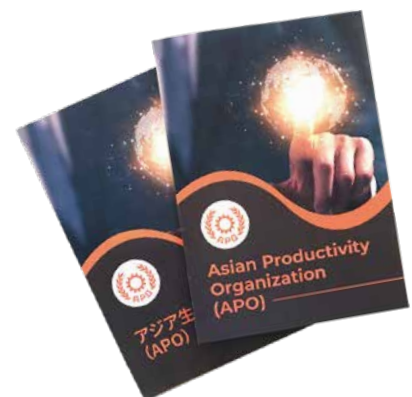
Figure 10. APO social media followers/subscribers in 2023



### Collaterals

As part of the multifaceted approach, the DIU developed the following collaterals as promotional materials to increase the visibility of the APO.

Format	Collateral
Video	<ol style="list-style-type: none"> <li>1. Updated APO Corporate Video</li> <li>2. Highlights of the 65th Session of the APO GBM in Mongolia</li> <li>3. Highlights of the 64th WSM in Turkiye</li> </ol>
Digital & Print	<ol style="list-style-type: none"> <li>4. APO brochure in English and Japanese</li> <li>5. Leaflet on APO Centers of Excellence and Certification Bodies</li> <li>6. The APO Footprint: Mapping Success One Step at a Time</li> </ol>



••••• APO brochures in English and Japanese

Plans are underway to develop a set of marketing tools and guidelines, the APO Promotional Branding Kit, for distribution to all APO project implementation partners in early 2024, ensuring visibility and consistency in promoting the APO across member economies.

### Publications

Thirty-six publications were released in 2023, the most in a single year so far, and are available on the APO website. They comprised research reports, serials (e.g., *Productivity Insights*), and the *Annual Report*. The total number of publication downloads recorded was over 14,400, compared with 9,700 in 2022. The list of publications can be found on the right.

The DIU facilitated the establishment of a membership with CrossRef for the registration of Digital Object Identifiers (DOIs) for all APO publications. The use of DOIs significantly enhances their discoverability and credibility within the global scholarly community, thereby enabling easier citation and more efficient tracking of APO publication utilization.

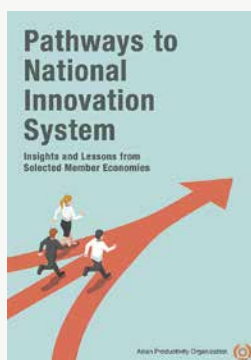
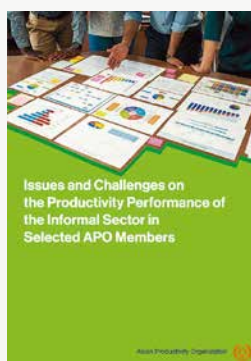
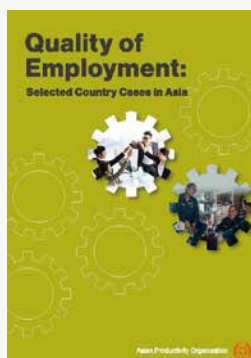
### APO Honorary Fellows

Since 1978, the title of APO Honorary Fellow has been conferred by the Governing Body on former APO Directors, Alternate Directors, NPO Heads, Secretaries-General, or Liaison Officers in recognition of their outstanding contributions to the organization.

The following individuals were conferred the title of APO Honorary Fellow in 2023:

- Former APO Alternate Director and NPO Head for Malaysia Dato' Abdul Latif Haji Abu Seman
- Former NPO Head and Liaison Officer for Nepal Kalyan Ghimire
- Former APO Liaison Officer for the ROK Jun-Ho Kim
- Former APO Liaison Officer for the ROK Taiho Kang
- Former APO Liaison Officer for Indonesia Astri Christafilia Litha.





### Research Reports

- Adaptation of High-income Economies
- High-income Pathways for UMICs
- Hotel Productivity Benchmarking
- How LMICs Could Increase Productivity
- Inclusive Innovation Policies for Economic Growth
- Issues and Challenges on the Productivity Performance of the Informal Sector in Selected APO Members
- Pathways to National Innovation Systems
- Policies for Enhancing Productivity with New Skills
- Powering National Outcomes from New Digital Technologies
- Quality of Employment
- Reskilling Workers for Enhancing Labor Productivity in Asia
- Smart Agricultural Transformation in Asian Countries
- SME Transformation for Meeting the SDGs in Asia
- The Prosperity Gambit

### Serials

- *APO Productivity Databook 2023*
- *APO Productivity Outlook 2023*
- *Productivity Insights, Volume 2*
  - SME Productivity
- *Productivity Insights, Volume 3* (10 publications)
  - Biodigesters and Green Productivity
  - Business Analytics for SME Productivity
  - Competitive, Profitable, New-normal SMEs
  - Empowering the Female Rural Workforce
  - Enhancing Productivity through DXPO
  - Ethics Management in the Public Sector
  - Industry 4.0 Behavioral Insights
  - Interactive Networking Approach in Agribusiness
  - Smart Green Manufacturing
  - Women's Empowerment in the Digital Age
- *Productivity Insights, Volume 4* (5 publications)
  - Confronting Asia's Challenging Demographic Realities
  - Knowledge Management and Innovation
  - Innovation Ecosystems to Drive Productivity
  - Rapid Cost-reduction Approaches for SMEs
  - Untold Essence of the Toyota Production System (TPS)
- *Productivity Analysis* (3 publications)
  - E-Government: Policy and Strategy for Productivity Growth in the Philippines
  - Indian MSMEs and Firm Productivity: COVID-19 Impact and Government Support
  - Productivity in Pakistan: Estimates, Bottlenecks, and the Way Forward

### Annual Report

- *APO Annual Report 2022*

## Information Technology

Strengthening the Digital Learning Program using advances in IT remained instrumental in the effective, efficient delivery of services to APO members through P-Talks and e-courses using digital platforms. Given the proven benefits that digital technology in general brings to APO programs, the overall Digital Learning Program will strengthen and expand the capacity-building initiatives of the APO with more stakeholders across different sectors being served and reached.

### *Enhancing the Strategic Digital Capability Initiative*

The APO digital transformation journey continues with the development of a new platform of integrated functions for NPOs, project participants, and resource persons to maximize operational efficiency and minimize redundant work. The APO Strategic Digital Capability (SDC) Plan 2021–25 strengthens the digital capability of the Secretariat to improve operations and services to members by integrating core functions through a common platform in line with the APO Vision 2025 strategic thrust of achieving operational and institutional excellence.

In the first phase of the SDC, the Secretariat successfully implemented the SAP Business ByDesign system for integrated project management and finance and budget management, which simplified many processes and enabled the issuance of all Project Notifications using standard templates.

In the second phase, as reported to the 64th WSM, a consultative session with NPOs was held in July 2023 to identify their requirements. A new participant and resource person management system will be implemented by the Secretariat through the Salesforce platform. The digitalization of this management process will change the work style of the Secretariat and NPOs in interactions for project implementation. At present, significant time and effort are required for email communications and document management among stakeholders.

This change in the business process will add value to APO and NPO operations by reducing the workload and streamlining processes with the introduction of online project management. The new system will minimize the need to use multiple platforms, like email, file storage, surveys, etc., among the Secretariat, NPOs, participants, and resource persons, and as a result the overall efficiency of project operations will be enhanced. Moreover, the new system will enable NPOs to use the APO resource person database for identifying and inviting relevant experts for their own projects and assignments.

The digital transformation journey of the APO is a continuous process with the introduction of innovative IT systems and technologies to maintain a competitive, efficient, healthy work environment. The Secretariat and NPOs will continue to work together for the smooth delivery of productivity knowledge and initiatives in the Asia-Pacific region.



### ***IT Infrastructure Improvement and Cybersecurity***

To adapt a work from anytime and anywhere approach, ubiquitous applications and digital services are expected to provide consistent user experience and security no matter where devices are located or which devices are used. Continuous effort to improve security was made in access management by disseminating sign-in validation with biometric or multifactor authentication. Multiple servers were replaced over the system life cycle, resulting in reduced running costs and increased data availability. Following the recommendations generated through the Governing Body-led exercise of Independent Evaluation of the APO Secretariat's Performance, Management, and Compliance by a Third Party (2022–23), the process for development of the IT security policy was embarked upon. As the initial step, defining the IT policy with the focus on protecting personal information and the organization's assets commenced.



## International Cooperation

The APO continued its cooperation with other international organizations based in the Asia-Pacific region such as ASEAN and the Economic Research Institute for ASEAN and East Asia (ERIA) in 2023. The APO Secretariat was invited as a speaker at the Symposium for Promoting Resilient and Sustainable Agriculture and Food Systems through Innovation: ASEAN's Initiatives and Japan's Contribution co-organized by the ASEAN Secretariat and ERIA in Jakarta.

The APO Secretariat also attended ESCAP meetings virtually, including the Asia-Pacific Commemoration of the International Day of Persons with Disabilities. The ongoing collaboration with Keio University was instrumental in the publication of the annual *APO Productivity Databook* and database, flagship projects of the APO.

Beyond the region, the APO continued to take part in OECD Global Forum on Productivity (GFP) activities, including virtual attendance at the 20th Steering Group Meeting of the GFP and Annual Conference of the OECD GFP. The APO also attended events under the G7 Hiroshima Summit, such as the Symposium on Gender Equality Advisory Council Report 2023.

The APO continued serving on the Examination Committee for the JICA Africa Kaizen Award, and the APO Secretariat attended the Africa Kaizen Annual Conference 2023 in Addis Ababa. The APO Secretary-General also virtually participated as a panelist in the World Bank event titled *Unlocking the Full Potential of Digital Transformation in South-East Asia: Role of Public and Private Sector*.

In addition, the APO Secretary-General received a courtesy visit by the Ambassador of the Republic of Uzbekistan and noted its interest in APO membership.



APO SG Dr. Indra (R) and  
Ambassador Extraordinary  
and Plenipotentiary  
H.E. Mukhsinkhuja  
Abdurakhmonov, Republic  
of Uzbekistan

# APO Footprints

The APO's programs are strategically aligned to achieve three pivotal goals under the Vision 2025. This section of the annual report features narratives of how the 2023 initiatives have driven progress toward those goals and left footprints in APO members and beneficiaries.

**2021**

**2022**



**2023**

**2024**

## GOAL

## 1

## Sustained Productivity Growth

Sustained productivity growth embodies the pursuit of continuous improvement in productivity, efficiency, and effectiveness across sectors, contributing to economic growth and higher standards of living. Achieving this goal ensures that APO members can expand their economic capacities and enhance their resilience to global challenges, while also reducing poverty and income inequality. Specific initiatives are highlighted below, showcasing how the APO advances sustained productivity growth by 1) promoting climate change mitigation and adaptation technologies through the Center of Excellence (COE) on Climate-smart Agriculture (CSA), 2) applying knowledge management (KM) principles in industries, and 3) transforming corporate leadership through smart transformation.

**Innovative, Sustainable Agriculture:****APO Launches New COE on Climate-smart Agriculture**

The agriculture sector is crucial to the economies of APO members, employing a vast workforce and significantly contributing to GDP. However, the escalating impacts of climate change threaten agricultural stability and productivity, necessitating innovative, sustainable solutions.

The COE on Climate-smart Agriculture (CSA) was established on 10 March 2023, hosted by the Japanese National Agriculture and Food Research Organization (NARO). Aiming to enhance agricultural productivity and farmers' profits while reducing greenhouse gas emissions, it focuses on training, research, and pilot projects to deploy climate change mitigation and adaptation technologies, with a primary emphasis on rice, the staple food of the Asia-Pacific region.

In 2023, significant strides led to the identification of needs and assessment of readiness among eight APO members through multiple surveys and a strengthening program to study the best practices and operations of the COE on Green Productivity (GP) and Smart Manufacturing (SM) by the CPC. Figure 1 illustrates a finding from the survey on the importance of soil carbon sequestration in APO members. After that survey, Thailand was selected for a pilot project in 2024 to introduce CSA-related technologies.





**Figure 1:** Importance of the soil carbon sequestration visualization tool in eight member economies based on the results of the need and readiness survey of APO member economies for implementing CSA technologies

#### Importance of Soil Carbon Sequestration Visualization Tool

- 5 Very important
- 4 Fairly important



Subsequently, an International Conference on CSA was held in October 2023 to promote awareness of and knowledge exchanges on innovative CSA practices and their benefits among APO members. This marked the first year of activities for the newly established COE, setting a strong foundation for becoming a pivotal resource in the region.

The APO continues to promote and strengthen the COE on CSA by engaging a broader array of stakeholders in sustainable agricultural practices, boosting productivity and resilience, and supporting livelihoods while promoting environmental sustainability and reducing emissions. These efforts are key to achieving the APO's Vision 2025, with GP at the heart of sustainable development in the Asia-Pacific. The COE on CSA contributes to the centrality of productivity by expanding capacity building, tailoring best practices to local needs, broadening GP to include climate change, and conducting targeted, data-driven productivity assessments.



International Conference on CSA, Japan.



## Institutionalizing Productivity through Application of Knowledge Management: Case Study of Erdenet Mining Corporation

In 2023, the Mongolian Productivity Organization (MPO) partnered with the APO to enhance KM in key sectors, selecting Erdenet Mining Corporation (EMC) as a demonstration company. EMC, operating the world's fourth-largest copper mine and a major contributor to Mongolia's GDP, faced challenges in knowledge retention, innovation, and productivity among its young and inexperienced workforce. Approximately 70% of ECM employees are between the ages of 20 to 40, with 51% of them having less than 10 years of experience, despite the company's accumulation of knowledge over 50 years of development (Figure 2).

**Figure 2:** Breakdown of EMC employee demographics reported prior to the start of the project



The project was divided into four phases: introducing KM; developing goals; assessing areas for intervention; and designing a roadmap to incorporate KM frameworks into operations. The final phase focused on measuring achievements and disseminating the know-how and successes.

To address these challenges, EMC identified the need to share knowledge within the workplace and facilitate the transfer of experience to employees. This initiative focused on several key actions:

- Bringing documented information closer to knowledge seekers;
- Enhancing productivity by ensuring ergonomic work environments for employees;
- Developing a comprehensive database for effective management and utilization of documented information and resources; and
- Systematically distributing and documenting the knowledge gained through experience to benefit the entire workforce.

EMC launched a KM project on “the Knowledge-sharing Workplace” led by the Suld Quality Circle team, for which the staff repair room was transformed into a micro-learning hub. Lighting and sliding boards were installed on the walls, showcasing technical diagrams, breakdowns, and parts of essential equipment for repair. Manuals and instructional materials were prominently displayed and regularly updated to ensure accessibility for all employees. “Behind this information board, there is a shelf. This information board for the 40-ton Belaz truck spare parts can give guidance on assembling, dismantling, or ordering spare parts, which saves time by allowing us to get all this necessary information from this single point in our workplace without the need to look for a manual,” explained Budbazar B., a specialist from the EMC auto transportation unit.

Suld team preparing displays and materials for sharing workplace knowledge



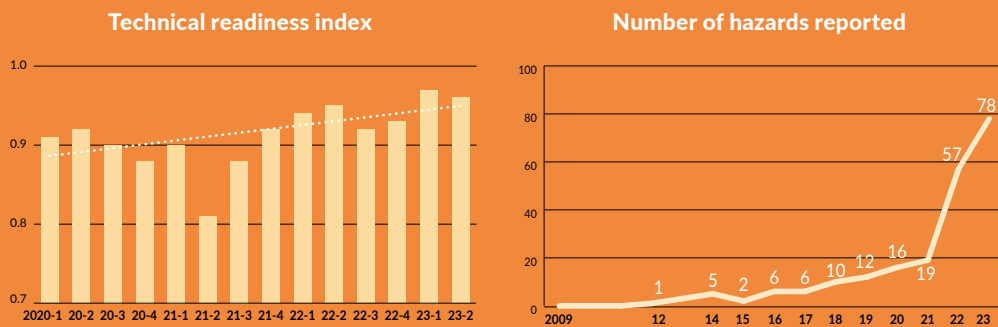
The project involved a series of strategic actions designed to improve operational knowledge and reduce downtime. Data on the breakdowns and operational inefficiencies of crusher components were meticulously collected and analyzed. To enhance knowledge transfer, targeted training sessions were organized, and a mentor-mentee system was implemented, ensuring that the depth of technical know-how was deepened across the workforce.

After five months of implementation, significant progress was achieved: three sections were added to the LED information board, 11 sections to the sliding information board, and labeling in 20 locations by employees; and four types of brochures and three videos with voiceovers and subtitles on occupational health and safety were created.



The impacts were profound, evident in the increased technical readiness ratio and heightened employee engagement in threat detection and reporting (Figures 3 and 4), leading to a decrease in threats. As a result, employee satisfaction levels have seen a notable increase. Tsogtgerel G., General Engineer, emphasized the broader impact of these improvements: “By sharing skills and knowledge from one employee to another, we will ensure that the organization’s operations will never stop due to depending on a single employee.”

**Figures 3 and 4:** Technical readiness index by quarter and number of hazards reported for risk management



Reflecting on the project’s success, Productivity Expert Urantsetseg L. of the Strategic Development Department noted, “We can see that putting this project into action was successful in teaching us how to manage knowledge inside the organization and how to boost productivity using effective learning strategies.” The project’s success was underpinned by strong management support, as Oktyabr B., Head of the Strategic Development Department, highlighted: “The management team of Erdenet Mining Corporation prioritized and gave full support for implementing this knowledge management project. We were able to effectively finish the project by appointing a working group, project teams, units, and implementation plans for each subproject with the General Director’s order.”

The EMC case study demonstrates how the APO assists in expanding capacity building and promoting best practices, thereby contributing significantly to the centrality of productivity within organizations, which can be emulated by other enterprises. These efforts exemplify how targeted organizational initiatives can lead to significant productivity improvements, contributing to broader economic and developmental goals.



## Transforming Corporate Leadership in Indonesia

In Indonesia, Dialah Hokосуja Hutabalian, Competency & Program Development Manager of PT ANTAM Tbk, recognized the need for upskilling and reskilling to meet challenges like climate change and digitalization. "It is very important and made me serious about nurturing future leaders and best talents in my organization," Hutabalian noted, emphasizing his commitment to driving meaningful change.



Dialah Hokосуja Hutabalian

In June 2023, Hutabalian attended the APO training course on Customer Experience Design for Productivity in Singapore, where he acquired essential insights that enabled him to refine the "Leader as a Generative Coach" program. "The course... helped me to improve the program," Hutabalian reflected, underscoring the transformative impact of the APO project on PT ANTAM Tbk's practices. Following the program's implementation, participant survey results suggested that the training program was effectively designed and delivered, with a score of 4.5 out of 5. In addition, the average improvement score rate was 60%, indicating that the program successfully equipped participants with the necessary knowledge, skills, and attitudes to perform better in their roles. This was supported in the notable improvement in the organization's 2023 employee engagement survey results and employee productivity rate of 88.33% and 110%, respectively.

**The APO course... helped me to improve the program.**

Dialah Hokосуja Hutabalian  
Competency & Program  
Development Manager  
PT ANTAM Tbk, Indonesia

Hutabalian's efforts to disseminate the lessons learned from the APO project extended beyond his immediate organization. He shared his insights with the People and Organization Development Division and contributed to the wider community through workshops held by the Directorate for Productivity Improvement, Indonesian Ministry of Manpower, Indonesia's NPO.

This initiative established a foundation for enhancing productivity within the corporate culture, setting new benchmarks for leadership and development amid rapidly changing workplace dynamics. Through his visionary leadership and innovative application of APO training, Hutabalian is not only shaping the future of PT ANTAM Tbk but is also contributing to the broader narrative of smart transformation in Indonesia's corporate landscape.



Leader as a Generative Coach training (above) and workshop with the NPO for Indonesia (right) facilitated by Dialah Hokосуja Hutabalian



## GOAL 2

### Robust Innovation Ecosystem

A robust innovation ecosystem recognizes innovation as the primary engine driving productivity and thrives under conditions that nurture creativity and technological advances. By prioritizing a robust innovation environment, APO members can enhance their productivity and economic resilience and stay competitive in the global economy. Specific initiatives are highlighted below showcasing how the APO promotes the transfer of innovative technologies in the agriculture and industry sectors among its members.



#### Integrating Innovative Japanese Microclimate Control Systems to Enhance Vietnam's Vegetable Production

Vegetable demand in Vietnam has diversified, with more produce being processed, frozen, and exported. To meet the increasing and varied demands, there is a need to enhance production and improve quality. However, labor productivity remains low in Vietnam, and cutting labor costs has exacerbated the issue. Thus, precise vegetable production control is essential to enhance output.

“ I gained valuable knowledge and observed the best practices in microclimate control within greenhouses in Japan. ”

A Vietnamese participant

Under a Ministry of Agriculture, Forestry and Fisheries (MAFF) Special Cash Grant supported by the Government of Japan, the APO initiated a demonstration farm project on the Improvement of Productivity in Greenhouse Vegetable Production in Vietnam to demonstrate microclimate control systems used by Japanese greenhouses. As part of this long-term project, 10 Vietnamese counterpart staff were invited to Japan for an observational study mission on Microclimate-controlled Greenhouses for Innovative Agriculture. This visit allowed them to observe and experience the mechanisms of control and microclimate data collection and analysis conducted by leading Japanese farms and plant factories before adopting those tools and technologies locally.







Observational study mission on Microclimate-controlled Greenhouses for Innovative Agriculture, Japan



MAFF Director for International Agriculture Organizations Keiichi Sugita emphasized the overall vision during his opening remarks, “Japan launched the Strategy for Sustainable Food Systems, MIDORI in 2021 and aims to achieve resilient, sustainable agriculture and food systems. We are eager to extend these systems across Asia, where climates are similar to Japan’s, enhancing sustainability and resilience through innovative technology.”

One of the Vietnamese participants stated, “This project has been incredibly beneficial for me. I gained valuable knowledge and observed the best practices in microclimate control within greenhouses in Japan, which I am now applying to my own operations.”

By effectively transferring knowledge, best practices, and innovative technology, this initiative not only improves agricultural productivity but also contributes to building a robust innovation ecosystem, boosting resilience and competitiveness in the region through international collaboration.



Site visit to a Japanese farm





## Advancing Innovation and Best Practices in Manufacturing and Disaster Management in Turkiye

The APO has been instrumental in supporting Turkiye, its newest member, by facilitating collaborative sharing of innovative best practices to boost productivity across the manufacturing and public sectors.

In line with Turkiye's national agenda to strengthen its manufacturing ecosystem, the country established Capability and Digital Transformation Centers, also known as model factories. These centers are designed to contribute to the development of policies to enhance productivity and accelerate digital transformation within the manufacturing sector. Through an APO-facilitated Bilateral Cooperation between NPOs (BCN) project involving Turkiye and Malaysia on Best Practices in Learning Factories in August 2023, Turkish delegates were exposed to advanced practices in lean manufacturing and digital transformation at Malaysia's Model Factory and Faculty of Industrial Management (FIM) Learning Factory. This successful exchange resulted in the drafting of an MOU between the two NPOs to facilitate continued collaboration.



BCN on Best Practices in Learning Factories, Malaysia



TES project on Increasing Efficiency of Provincial Disaster Management, Turkiye

Additionally, following the devastating twin earthquakes in February 2023, Turkiye's Denizli Governorship leveraged the APO's extensive network of experts to enhance its strategies for disaster risk mitigation and crisis management. Responding promptly, the APO dispatched experts from Japan's Kansai University and the Asian Disaster Reduction Center, renowned for their advanced disaster management methodologies. Those experts engaged in comprehensive knowledge sharing through workshops, conferences, and field visits with 330 participants from 97 organizations, significantly strengthening Turkiye's disaster response capabilities. The impact of those efforts was recognized by the Denizli Governorship, which stated, "We have made significant progress by sharing information about local action plans and possible scenarios in Denizli province with experts in Japan. Dr. Makoto Ikeda and Prof. Masahiko Murata interactively compared the practices of Turkiye and Japan, evaluating good practices with participants." Consequently, Denizli Municipality made innovative mobile toilet kits available to address postdisaster hygiene issues and revised training protocols based on the best practices observed during the sessions.

Those initiatives highlight the crucial role of a robust innovation ecosystem in expanding expert networks and deepening strategic partnerships. Through collaborative efforts with other APO members, Turkiye has acquired essential knowledge in innovation capability and business dynamism, fostering continuous learning and adaptation, which are vital for maintaining global competitiveness and preparing for future challenges.

Those initiatives highlight the crucial role of a robust innovation ecosystem in expanding expert networks and deepening strategic partnerships. Through collaborative efforts with other APO members, Turkiye has acquired essential knowledge in innovation capability and business dynamism, fostering continuous learning and adaptation, which are vital for maintaining global competitiveness and preparing for future challenges.



GOAL  
**3**

## Inclusive Engagement and Shared Prosperity

The third goal highlights the inclusivity of productivity and its broad benefits for communities. It focuses on two key areas: inclusive engagement, which stresses the intentional, proactive inclusion of all societal segments in the productivity movement; and shared prosperity, which represents the distribution of productivity gains or wealth created. Specific initiatives are highlighted below, showcasing how the APO engages with and empowers SMEs and the creative sectors.



### Pioneering Lean and Digital Transformation for Indonesian SMIs

Eko Prasetyo, an Industrial Supervisory Officer dedicated to Small and Medium-scale Industry (SMI) Development in the Ministry of Industry, Republic of Indonesia, embarked on a mission to tackle a pressing challenge: developing models to nurture Indonesian SMIs, crucial engines of employment and agents in poverty eradication in Indonesia.



Eko Prasetyo

“**Hopefully, SMI productivity will increase.**”

Eko Prasetyo  
Industrial Supervisory Officer,  
Small and Medium-scale  
Industries (SMI) Development,  
Ministry of Industry, Republic  
of Indonesia

Recognizing the potential impact of enhancing SMI productivity, Eko participated in the APO’s multicountry observational study mission on Best Practices in Lean and Digital Transformation for SMEs in 2023. That study mission to Turkiye equipped him with a comprehensive understanding of how lean production systems and digital transformation strategies could significantly benefit SMIs, particularly in fostering a competitive edge and ensuring sustainable growth. Inspired by the knowledge acquired, Eko reevaluated and revised schemes to increase SMI awareness of the benefits of adopting lean production systems. He explained, “My team and I are consulting and assisting several SMIs for Industry 4.0 implementation, which includes the requirement of integrating lean management into their production lines.” Although the tangible outcomes of these initiatives are expected in 2024, Eko is optimistic about the potential productivity increase among SMIs, stating, “Hopefully, SMI productivity will increase.”

This initiative marks a significant step toward revolutionizing Indonesian SMIs by introducing them to lean and digital practices, setting the stage for a more productive, efficient, competitive national SMI landscape.

His efforts to drive lean and digital transformation in Indonesian SMIs showcase a commitment not only to the growth of the sector but also to the broader goals of job creation and poverty eradication.



Consultation meeting with a local SMI





## Empowering Mongolia's Creative Industries for Economic Growth and Inclusion



Mandukhai Baldandorj

Mandukhai Baldandorj, Director of Innocon LLC, is revolutionizing the landscape for SMEs in Mongolia by harnessing insights from APO projects. Heading a women-led consultancy, she is committed to enhancing SMEs ranging from cashmere manufacturers to IT service providers, with the goal of integrating global innovation and productivity strategies into Mongolia's business ecosystem.

Since joining Innocon LLC three years ago, Mandukhai has faced challenges in cultivating collaboration within Mongolia's emerging business ecosystem. "To gain a competitive edge, it is crucial for SMEs to work together. Yet, our business ecosystem is in its early stages, with collaboration and partnership limited at all levels," she explained. Motivated to bridge those gaps, she engaged with the MPO and participated in APO projects covering business models, innovation ecosystems, and the creative economy. "I aim to foster international collaboration and engage in the global market," she explained.

**To gain a competitive edge, it is crucial for SMEs to work together.**

Mandukhai Baldandorj  
Director  
Innocon LLC, Mongolia

Equipped with valuable insights from APO workshops and e-courses, Mandukhai spearheaded the development of a strategic plan for a local museum, Choijin Lama Temple Museum, to improve its productivity and set new efficiency standards for Mongolia's cultural institutions. Additionally, inspired by her participation in the APO workshop on the Future of the Creative Economy held in November 2023, she invited fellow participant Dialah H. Hutabalian and resource person Jairaj Mashru to share their valuable insights on leadership in coaching for productivity and the creative economy at the ICIED 2024: Age of Innovation and Digitalization in April 2024, in Mongolia. This conference effectively spread critical knowledge and best practices, catalyzing growth and inclusive productivity efforts in national development.

Mandukhai Baldandorj's journey is a testament to the power of international collaboration and knowledge sharing in driving growth and transformation. As she continues to lead Innocon LLC and shape Mongolia's business and cultural landscapes, her initiatives underscore the vital role of global insights in local transformation to influence policy enhancement and strengthen support for creative professionals and enterprises throughout Mongolia.



Strategic plan development at Choijin Lama Temple Museum



ICIED 2024: Age of Innovation and Digitalization, Mongolia



## Strategic Partnerships Propel Achievement of APO Vision 2025 Goals

To meet the goals of Vision 2025, the APO has made significant strides to ensure continued support from its members. In 2023, the Secretary-General pursued strategic partnerships with leading institutions and key stakeholders, focusing on expanding the APO's network and deepening collaboration to boost regional productivity and sustainability.

Throughout the year, the Secretary-General engaged with a range of influential figures and organizations, including high-level government officials. Notable discussions with the Prime Minister of Vietnam, Indonesian Minister of Manpower, and Deputy Director General of Japan's MAFF focused on establishing policy frameworks to support productivity initiatives across the public and private sectors.



Additionally, engagements with advisers, think tanks, and academics, such as Dr. Tetsushi Sonobe, Dean and CEO of ADBI; Dr. Chairil Abdini from BAPPENAS; and Professor Toshiro Nishizawa from the University of Tokyo, aimed to leverage academic research for productivity-enhancing projects and agreements. International diplomacy also played a crucial role in strengthening bilateral relations and regional cooperation, such as interactions with the Ambassador of Lao PDR, Ambassador of Pakistan, and Ambassador of Uzbekistan.

Those diverse engagements across multiple sectors and locations illustrate the APO's commitment to a collaborative approach in addressing productivity challenges in the Asia-Pacific region, laying a robust foundation for ongoing and future initiatives to enhance sustainable productivity for socioeconomic development.





# Financial Statement





## Independent Auditor's Report

To the Governing Body of Asian Productivity Organization

### Our opinion

In our opinion, Asian Productivity Organization (the "Organization")'s financial statements present fairly, in all material respects, the financial position of the Organization as at 31 December 2023, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards.

### What we have audited

The Organization's financial statements comprise:

- the statement of financial position as at 31 December 2023;
- the statement of revenues or expenses and other comprehensive income for the year then ended;
- the statement of changes in surplus for the year then ended;
- the statement of cash flows for the year then ended; and
- the notes to the financial statements, comprising material accounting policy information and other explanatory information.

### Basis for opinion

We conducted our audit in accordance with International Standards on Auditing ("ISA"). Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the financial statements* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Independence

We are independent of the Organization in accordance with the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA Code) and the ethical requirements that are relevant to our audit of the financial statements in Japan. We have fulfilled our other ethical responsibilities in accordance with the IESBA Code and the ethical requirements in Japan.

### Other information

Management is responsible for the other information. The other information comprises the annual report (but does not include the financial statements and our auditor's report thereon), which is expected to be made available to us after the date of this auditor's report.

Our opinion on the financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.



In connection with our audit of the financial statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

When we read the annual report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to management.

### **Responsibilities of management for the financial statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Organization's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Organization or to cease operations, or has no realistic alternative but to do so.

### **Auditor's responsibilities for the audit of the financial statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISA will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISA, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Organization's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Organization's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to



the date of our auditor's report. However, future events or conditions may cause the Organization to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with management regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

DocuSigned by:  
*PricewaterhouseCoopers Japan LLC*  
D942DB01EBED454...  
19 March 2024

**ASIAN PRODUCTIVITY ORGANIZATION**  
**STATEMENTS OF FINANCIAL POSITION**  
**31 DECEMBER 2023 AND 31 DECEMBER 2022**

(US dollars)

<u>ASSETS</u>	<u>2023</u>	<u>2022</u>
Cash and cash equivalents (Note 3)	\$25,985,373	\$22,692,967
Receivables (Note 4):		
Member countries	3,286,701	7,540,293
Others	72,870	1,328
Prepaid expenses	66,368	55,002
Deposits and other advance payments	<u>75,744</u>	<u>1,082,958</u>
Total current assets	<u>29,487,057</u>	<u>31,372,548</u>
Fund for severance payments (Note 11)	108,092	139,360
Property, plant and equipment (Note 5):		
Leasehold Improvement	527,181	527,181
Furniture & Fixture	169,326	169,326
Equipment	323,200	340,318
Automobile	72,935	72,935
Right of use assets (Note 13)	513,587	613,724
Accumulated depreciation	(1,011,278)	(1,232,393)
Construction/Development in progress (Note 5)	29,912	0
Intangible assets (Note 5)	<u>368,570</u>	<u>506,984</u>
Total noncurrent assets	<u>1,101,525</u>	<u>1,137,435</u>
<b>Total assets</b>	<b><u>\$30,588,581</u></b>	<b><u>\$32,509,983</u></b>
<b><u>LIABILITIES AND SURPLUS</u></b>		
Accounts payable	\$3,281,043	\$4,340,498
Withholding tax and social insurance	74,425	32,359
Lease liabilities - current (Note 13)	239,462	51,787
Other current liabilities (Note 8)	<u>3,395,812</u>	<u>4,881,767</u>
Total current liabilities	<u>6,990,742</u>	<u>9,306,411</u>
Accrued annual leave (Note 6)	424,753	508,880
Liability for severance payments (Note 12)	1,437,103	1,557,478
Lease liabilities - noncurrent (Note 13)	52,761	0
Other noncurrent liabilities	<u>119,591</u>	<u>119,591</u>
Total noncurrent liabilities	<u>2,034,207</u>	<u>2,185,948</u>
<b>Total liabilities</b>	<b><u>9,024,949</u></b>	<b><u>11,492,359</u></b>
Surplus:		
Appropriated for		
Working capital fund (Note 15)	7,000,000	7,000,000
Contingency fund (Note 2)	500,000	500,000
Continuing projects	4,741,873	4,438,134
Unappropriated surplus (Note 15)	9,220,282	9,040,342
Accumulated other comprehensive income (Note 12)	<u>101,477</u>	<u>39,148</u>
<b>Total surplus</b>	<b><u>21,563,632</u></b>	<b><u>21,017,623</u></b>
<b>Total liabilities and surplus</b>	<b><u>\$30,588,581</u></b>	<b><u>\$32,509,982</u></b>

The accompanying notes are integral part of these statements.



ASIAN PRODUCTIVITY ORGANIZATION  
STATEMENTS OF REVENUES OR EXPENSES AND OTHER COMPREHENSIVE INCOME  
YEARS ENDED 31 DECEMBER 2023 AND 2022

(US dollars)

	<u>2023</u>	<u>2022</u>
Revenues:		
Membership contributions (Note 7)	\$11,986,035	\$11,986,035
Special cash grants (Note 8)	1,596,120	1,667,515
Mandatory contribution for rent (Note 9)	197,160	205,411
Participation by member countries	350	350
Miscellaneous Revenue	<u>780,349</u>	<u>142,966</u>
Total revenues	<u>14,560,013</u>	<u>14,002,277</u>
Expenses:		
Projects		
Current year's project costs:		
APO share Current	<u>4,978,175</u>	<u>2,910,605</u>
Subtotal	<u>4,978,175</u>	<u>2,910,605</u>
Prior years' continuing project costs:		
APO share Continue	<u>2,966,516</u>	<u>2,953,274</u>
Subtotal	<u>2,966,516</u>	<u>2,953,274</u>
Allocation to project costs from		
Administration expenses (Note 10)	<u>2,240,730</u>	<u>2,322,125</u>
Total	<u>10,185,420</u>	<u>8,186,003</u>
Administration		
Staff expenses (Note 6, 12)	3,824,240	4,113,695
Office maintenance	21,546	33,637
Depreciation expenses (Note 5, 13)	306,558	335,823
Operations	124,624	126,259
Miscellaneous	180,687	160,955
Allocation to project costs (Note 10)	<u>(2,240,730)</u>	<u>(2,322,125)</u>
Total	<u>2,216,925</u>	<u>2,448,245</u>
Exchange (gain)/loss	307,018	754,657
Increase (decrease) in loss allowance (Note 4)	<u>1,353,979</u>	<u>712,897</u>
Total	<u>1,660,997</u>	<u>1,467,554</u>
Total expenses	<u>14,063,343</u>	<u>12,101,802</u>
Net adjustment gain/(loss) for closed projects (Note 14)	(12,991)	5,115
Excess of revenues over expenses (expenses over revenues)	<u>483,679</u>	<u>1,905,589</u>
Other comprehensive income (loss):		
Pension liability adjustments (Note 12)	62,330	91,186
Total other comprehensive income (loss)	<u>62,330</u>	<u>91,186</u>
Total comprehensive income (loss)	<u>\$546,009</u>	<u>\$1,996,775</u>

The accompanying notes are integral part of these statements.

**ASIAN PRODUCTIVITY ORGANIZATION**  
**STATEMENTS OF CHANGES IN SURPLUS**  
**YEARS ENDED 31 DECEMBER 2023 AND 2022**

(US dollars)

	Appropriated for			Unappropriated	Accumulated other comprehensive income	Total
	Working capital fund	Contingency fund	Continuing projects			
<b>2022</b>						
Surplus as of 1 January 2022	\$7,000,000	\$500,000	\$5,286,778	\$6,286,109	(\$52,038)	\$19,020,849
Excess of revenues over expenses	-	-	-	1,905,589	-	1,905,589
Transfer to (from) continuing projects	-	-	(848,644)	848,644	-	-
Pension liability adjustment (Note 12)	-	-	-	-	91,186	91,186
Surplus at end of year	<u>\$7,000,000</u>	<u>\$500,000</u>	<u>\$4,438,134</u>	<u>\$9,040,342</u>	<u>\$39,148</u>	<u>\$21,017,623</u>
<b>2023</b>						
Surplus as of 1 January 2023	\$7,000,000	\$500,000	\$4,438,134	\$9,040,342	\$39,148	\$21,017,623
Excess of revenues over expenses	-	-	-	483,679	-	483,679
Transfer to (from) continuing projects	-	-	303,739	(303,739)	-	-
Pension liability adjustment (Note 12)	-	-	-	-	62,330	62,330
Surplus at end of year	<u>\$7,000,000</u>	<u>\$500,000</u>	<u>\$4,741,873</u>	<u>\$9,220,282</u>	<u>\$101,477</u>	<u>\$21,563,632</u>

The accompanying notes are integral part of these statements.

ASIAN PRODUCTIVITY ORGANIZATION  
STATEMENTS OF CASH FLOWS  
YEARS ENDED 31 DECEMBER 2023 AND 2022

(US dollars)

	<u>2023</u>	<u>2022</u>
Cash Flows from Operating Activities:		
Excess of revenues over expenses (expenses over revenues)	\$483,679	\$1,905,589
Adjustments:		
Depreciation and amortization	583,454	628,211
Provision for losses on receivables	1,353,979	712,897
Interest income	(776,070)	(139,680)
Exchange variance	473,940	1,001,797
Decrease (increase) in receivables from member countries	2,896,255	(7,360,273)
Decrease (increase) in receivables - others	(68,185)	97,563
Decrease (increase) in other current assets	995,847	38,123
Decrease (increase) in funds for severance payments	31,268	44,008
Increase (decrease) in accounts payable	(1,062,518)	1,434,784
Increase (decrease) in other liabilities	(1,443,889)	(1,375,647)
Increase (decrease) in accrued annual leave	(84,127)	(215,828)
Increase (decrease) in liability for severance payments	(58,045)	(564,590)
Subtotal	<u>3,325,588</u>	<u>(3,793,047)</u>
Interest received	776,070	139,680
Net cash flow from operating activities	<u>4,101,658</u>	<u>(3,653,367)</u>
Cash Flows from Investing Activities:		
Acquisition for PP&E and intangible assets (Note 5)	(62,161)	(333,344)
Net cash flow from investing activities	<u>(62,161)</u>	<u>(333,344)</u>
Cash Flows from Financing Activities:		
Payments for lease liabilities (Note 13)	(254,978)	(291,848)
Net cash flow from financing activities	<u>(254,978)</u>	<u>(291,848)</u>
Effect of exchange rate changes on cash and cash equivalents	<u>(492,113)</u>	<u>(1,009,002)</u>
Net increase (decrease) in cash and cash equivalents	<u>3,292,406</u>	<u>(5,287,561)</u>
Cash and cash equivalents at beginning of year	<u>22,692,967</u>	<u>27,980,529</u>
Cash and cash equivalents at end of year (Note 3)	<u>\$ 25,985,373</u>	<u>\$ 22,692,967</u>

The accompanying notes are integral part of these statements.

## **ASIAN PRODUCTIVITY ORGANIZATION**

### **NOTES TO FINANCIAL STATEMENTS**

#### **1. Organization, business, and source of funding**

The Asian Productivity Organization (the “Organization” or “APO”) is an intergovernmental regional organization established in 1961 by several governments in Asia with its headquarters in 1-24-1 Hongo, Bunkyo-ku, Tokyo, Japan, and continues to operate from this location. The Organization is nonpolitical, nonprofit making, and nondiscriminatory.

The objective of the Organization is to increase productivity and thereby accelerate economic development in Asia through mutual cooperation among member countries. To fulfill its objective, the Organization institutes programs for the development of productivity, provides information and advice for productivity improvement, and promotes and disseminates modern productivity skills and techniques in the agriculture, industry, and service sectors.

The Organization membership is open to all Asian and Pacific governments that are members of the United Nations Economic and Social Commission for Asia and the Pacific. From 1 July 1997, the Hong Kong Productivity Council was instructed to cease all APO activities when sovereignty was transferred to the People’s Republic of China.

The Organization performs activities in cooperation with national productivity organizations (NPOs) and other international organizations. NPOs in member countries that deal with productivity activities at the national level act as implementing agencies for the Organization’s projects and nominate participants from their countries to attend those projects.

The budget of the Organization is composed of the budget covering the program of action of the Organization and staff, administrative, and non-project expenses. The Governing Body, which is the supreme organ of the Organization, meets once a year to decide on policy matters concerning program and budget, finances, and membership. The sources of the funding include:

- a) Annual membership contributions based on gross national income;
- b) Special cash grants given by member governments and external assistance from cooperating agencies and institutions;
- c) Mandatory contribution for rent given by the host government; and
- d) Miscellaneous income such as proceeds from interest income.



## 2. Significant accounting policies

### (1) Basis of preparation of accompanying financial statements

#### a) Compliance with IFRS

The financial statements of the Organization are prepared based on the Convention and the Financial Regulations established by the Organization, which is in line with International Financial Reporting Standards ("IFRS").

#### b) Historical cost conversion

The financial statements of the Organization are prepared on a historical cost basis, except for certain financial assets and liabilities which are measured at fair value.

#### c) Changes in accounting policies

New standards and interpretations are not yet adopted. Certain new accounting standards and interpretations have been published that are not mandatory for 31 December 2023 reporting period and have not been adopted early by the Organization. These standards are not expected to have material impact of the Organization in the current or future reporting periods and on foreseeable future transactions.

#### d) Authorization

The financial statements were authorized by the APO Secretary-General for issue on 19 March 2024.

### (2) Receivables

Receivables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method, less loss allowance.

### (3) Property, plant and equipment, intangible assets, and right-of-use assets

Property, plant and equipment consist of the leasehold improvements including contra-asset-retirement-obligation, furniture and fixtures, equipment, and automobile. Intangible assets include Software. The Organization books on the statements of financial position for the items whose acquisition cost amount is significant.

Depreciation is calculated to write off the cost of items of property, plant and equipment and intangible assets using the straight-line method over their estimated useful lives, and is recognized in profit or loss.

The estimated useful lives of the property, plant and equipment and intangible assets are as follows:

- Leasehold improvements: 5–8 years
- Furniture and fixtures: 5–8 years
- Equipment: 3–8 years
- Automobile: 6 years
- Software: 5 years

Right-of-use assets are generally depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

Depreciation methods and useful lives are reviewed at each reporting date and adjusted if appropriate.

### (4) Fund for severance payments

The fund for severance payments includes an insurance endowment fund and is stated at fair value. The fair values of the fund for severance payments are estimated based on values quoted by financial institution.

IFRS 7 "Financial Instruments—Disclosures" defines fair value and establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The three levels of the fair value hierarchy are as follows:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities  
 Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly  
 Level 3: Unobservable inputs for the asset or liability  
 The insurance endowment fund held by the Organization is classified into Level 2 assets.

#### **(5) Liability for severance payments**

Staff members terminating their employment with the Organization are entitled, under most circumstances, to severance payments based upon the monthly basic pay at the time of termination of employment and years of service. The cost of the severance payments is determined using the Projected Unit Credit Method, with actuarial valuations being carried out at the end of each reporting period. Remeasurements of the Organization's defined benefit obligation, which comprise actuarial gains and losses are recognized immediately in other comprehensive income.

#### **(6) Accrued annual leave**

Based on Rule 5.01 of APO Staff Regulation V, annual leave is accumulated up to 90 days, which does not expire until leaving the Organization. In 2023, the Organization recorded accrued annual leave of 71 days (70 days in 2022) for staff members who had annual leave of more than 71 days as a liability, taking into consideration both the rule that an annual leave up to 60 days is paid by a sum of money equivalent to their salary for the period of the accrued annual leave upon leaving the Organization and the possible utilization of unused accrued leave in excess of 60 days before leaving the Organization.

#### **(7) Revenues**

Major sources of revenues of the Organization are membership contributions and special cash grants, among others. Membership contributions, which are approved by the Session of the Governing Body (GBM), are recognized as revenues on 1 January of each fiscal year. Special cash grants are recognized as revenues over the period necessary to match them with the costs that they are intended to compensate.

#### **(8) Appropriation for working capital fund**

Based on Regulation 7 of the Financial Regulations, a working capital fund is established from which advances may be made to finance budgetary appropriations to the extent that this is necessary in anticipation of pledged but unpaid contributions. In 2012, the Organization set up a contingency fund amounting to \$500,000 as decided by the 54th GBM.

#### **(9) Appropriation for continuing projects**

The outstanding balance of commitments for continuing projects at year-end, which has been funded mainly from membership contributions, is appropriated for continuing projects. The balance for continuing projects funded from special cash grants includes unspent balances of special cash grants, which are balances generated from completion of some projects prior to the year-end being reallocated for the following year's projects in the same programs.

#### **(10) Translation of foreign currencies**

For the purpose of the financial statements, the results and financial position of the Organization are expressed in US dollars, which is the functional currency of the Organization and presentation currency for the financial statements. The Organization's books of account are maintained in US dollars. Assets and liabilities denominated in Japanese yen are translated into US dollars at the appropriate exchange rate on the statements of financial position date. For revenue and expense accounts, average rates for the prior month of the transactions are applied. Revenue and expense accounts of other currencies except Japanese yen are translated into US dollars at the rates prevailing at the time of the transactions. The resulting unrealized gain/loss from translation is included in exchange gain/loss in the statement of revenues or expenses and other comprehensive income.

**(11) Taxes**

The Organization is exempt from direct taxes on assets or income and from customs duties.

**(12) Use of estimates**

The Organization makes estimates and assumptions to prepare the financial statements. Such estimates and assumptions affect the reported amounts of assets, liabilities and expenses. Actual results could differ from those estimates.

**3. Cash and cash equivalents**

Cash and cash equivalents include all highly liquid investments, generally with original maturities of three months or less, which are readily convertible to known amounts of cash and are so near maturity that they present insignificant risk of changes in value because of changes in interest rates.

Cash and cash equivalents	2023	2022
Current Deposits	\$12,841,910	\$11,787,700
Time Deposits	13,143,463	10,905,267
Total	\$25,985,373	\$22,692,967

**4. Receivables of membership contributions, participating country expenses, and others**

Receivables	2023	2022
Membership contributions	\$11,598,925	\$14,495,180
Participating country expenses	3,288	6,810
Others	72,591	885
Loss allowance	(8,315,233)	(6,961,254)
	\$3,359,571	\$7,541,621

Receivables represent uncollected revenue from membership contributions, participating country expenses, and others. Membership contributions approved by the GBM are to be paid to the Organization from each member as soon as possible after the receipt of such advice according to Regulation 6 of the Financial Regulations. Loss allowance of \$8,315,233 comprises of the receivables overdue for one year and longer including \$8,312,224 for membership contributions and \$3,009 for participating country expenses.

The Organization has receivables that are subject to the expected credit loss model and applies the IFRS 9 simplified approach to measuring expected credit loss which uses lifetime expected loss allowance for the receivables.

31 December 2023	Current	More than 1 year overdue	Total
Expected loss rate	0%	100%	
Gross carrying amount - receivables	\$3,359,571	\$8,315,233	\$11,674,804
Loss allowance	-	\$8,315,233	\$8,315,233
31 December 2022	Current	More than 1 year overdue	Total
Expected loss rate	0%	100%	
Gross carrying amount - receivables	\$7,541,621	\$6,961,254	\$14,502,875
Loss allowance	-	\$6,961,254	\$6,961,254

The closing loss allowance for the years ended 31 December 2023 and 2022 reconcile to the opening loss allowance as follows:

	2023	2022
Opening loss allowance as of 1 January	\$6,961,254	\$6,288,806
Increase in loss allowance recognized in profit or loss during the year	1,357,337	712,897
Advance payment written off during the year as uncollectable	-	(40,450)
Unused amount reversed	(3,358)	-
Closing loss allowance as of 31 December	<u>\$8,315,233</u>	<u>\$6,961,254</u>

Loss allowance for the receivables is maintained for potential credit losses based upon the assessment of the receivables aging, taking into consideration any circumstances regarding member's inability to meet its financial obligations. The Organization's exposure to credit risk is influenced mainly by the individual characteristics of each member country. The maximum exposure to credit risk is represented by the carrying amount of receivables.

## 5. Property, plant and equipment and intangible assets

Movements in property, plant and equipment and intangible assets for the year ended 31 December 2023 were as follows:

	Leasehold Improvement	Furniture & Fixture	Equipment	Automobile	Total	Construction/ Development in Progress	Software
<b>Acquisition Cost</b>							
On 1 January 2023	\$527,181	\$169,326	\$340,318	\$72,935	\$1,109,760	\$0	\$1,048,862
Additions			10,557		10,557	29,912	24,756
Disposals			(27,675)		(27,675)		(173,528)
Transfer					0		
On 31 December 2023	527,181	169,326	323,200	72,935	1,092,642	29,912	900,090
<b>Accumulated depreciation</b>							
On 1 January 2023	269,211	104,172	233,468	72,935	679,786		541,878
Depreciation	50,949	32,577	72,449	0	155,975		163,170
Disposals			(27,675)		(27,675)		(173,528)
On 31 December 2023	320,160	136,749	278,242	72,935	808,086		531,520
<b>Net Book value</b>							
On 1 January 2023	257,970	65,153	106,850		429,973		506,984
On 31 December 2023	\$207,021	\$32,577	\$44,958	\$0	\$284,556	\$29,912	\$368,570

The total depreciation amount of \$319,145 for 2023 was recognized, including \$227,840 as project costs and \$91,305 as administration expenses.

Movements in property, plant and equipment and intangible assets for the year ended 31 December 2022 were as follows:

	Leasehold Improvement	Furniture & Fixture	Equipment	Automobile	Total	Construction in Progress	Software
<b>Acquisition Cost</b>							
On 1 January 2022	\$527,181	\$169,326	\$340,318	\$72,935	\$1,109,760	\$0	\$713,775
Additions							335,088
Disposals							
Transfer							
On 31 December 2022	527,181	169,326	340,318	72,935	1,109,760		1,048,862
<b>Accumulated depreciation</b>							
On 1 January 2022	218,262	70,307	153,849	72,935	515,354		384,962
Depreciation	50,949	33,865	79,619		164,433		156,916
Disposals							
On 31 December 2022	269,211	104,172	233,468	72,935	679,786		541,878
<b>Net Book value</b>							
On 1 January 2022	308,919	99,018	186,468		594,405		328,812
On 31 December 2022	\$257,970	\$65,153	\$106,849	\$0	\$429,973	\$0	\$506,984

The total depreciation amount of \$321,348 for 2022 was recognized, including \$229,996 as project costs and \$91,352 as administration expenses.

## 6. Accrued annual leave

Movements in accrued annual leave for the years ended 31 December 2023 and 2022 were as follows:

	2023	2022
On 1 January	\$508,880	\$724,708
Additional accrual during the year	30,716	67,492
Payments made during the year	(79,281)	(155,380)
Reclassified to payable	0	(37,231)
Foreign exchange movements	(35,562)	(90,710)
On 31 December	<u>\$424,753</u>	<u>\$508,880</u>

## 7. Membership contributions

The apportionment of total membership contributions for 2023/2024 follows the membership contribution formula based on the six-year average GNI, approved first by the 64th GBM held in June 2022. There are no unfulfilled conditions or other contingencies attaching to these contributions.



## 8. Special cash grants

Special cash grants are used for specific programs and other administrative expenses for which member governments are encouraged to cooperate with the Organization in addition to their membership contributions. There are no unfulfilled conditions or other contingencies attaching to these grants. The Organization will recognize special cash grants received from the Government of Japan as revenues over the period necessary to match them with the costs that they are intended to compensate. Unrecognized revenue balances for the years ended 31 December 2023 and 2022 were as below, which were included in other current liabilities.

	2023	2022
Unrecognized revenue on 1 January	\$4,830,602	\$6,223,395
Grants received during the year	112,872	274,722
Revenue recognized during the year	(1,596,120)	(1,667,515)
Unrecognized revenue on 31 December	<u>\$3,347,354</u>	<u>\$4,830,602</u>

## 9. Mandatory contribution for rent

The 54th GBM held in April 2012 decided that the cost of the annual rent for the APO Secretariat Office from 2013 shall be borne by the host government, as a mandatory contribution of the host government, distinct and separate from its annual membership contribution to the APO.

## 10. Allocation to project costs

The Organization allocated administration expenses which are directly or indirectly related to project activities to project costs. Allocation to project costs includes the staff expenses of program directorate.

## 11. Fund for severance payments

In 2001, the Organization purchased an insurance for employees as a fund for severance payments, of which the beneficiary is the Organization. Net gains on the fund for the insurance endowment fund for the years ended 31 December 2023 and 2022 were \$1,567 and \$2,210, respectively, and were included in miscellaneous revenues.

## 12. Liability for severance payments

For the purposes of the actuarial valuations, the Organization used the discount rate of 0.83% per annum for the year ended 31 December 2023 and 0.88% for the year ended 31 December 2022. The expected rate of salary increases was applied in determining the projected benefit obligation and the expected rate was compiled from data of employee's basis salary.

Amounts recognized in profit or loss in respect of the defined benefit plan were as follows:

	2023	2022
Current service cost	\$215,909	\$267,304
Interest on obligation	12,130	6,627
Net periodic pension cost	<u>\$228,039</u>	<u>\$273,931</u>

Movements in the present value of the defined benefit obligation in the current period and the amount included in the statements of financial positions arising from the Organization's obligation in respect of its defined benefit plan were as follows:

	2023	2022
Opening defined benefit obligation	\$1,557,478	\$2,213,254
Current service cost	215,909	267,304
Interest cost	12,130	6,627
Remeasurements (actual gain/loss)	(62,330)	(91,186)
Payments made during the year	(167,769)	(330,205)
Reclassified to payable	0	(207,066)
Foreign currency translation adjustments	(118,316)	(301,250)
Closing defined benefit obligation	<u>\$1,437,103</u>	<u>\$1,557,478</u>

### 13. Leases

Movements in the right-of use assets for the year ended 31 December 2023 were as follows:

	Office building	Equipment	Total
Right-of-use assets on 1 January 2023	\$613,724	\$0	\$613,724
Additions	506,176	7,412	513,587
Lease contract terminations	(613,724)	0	(613,724)
Right-of-use assets on 31 December 2023	<u>\$506,176</u>	<u>\$7,412</u>	<u>\$513,587</u>
Accumulated depreciation on 1 January 2023	\$552,606	\$0	\$552,606
Depreciation	263,197	1,112	264,309
Lease contract terminations	(613,724)	0	(613,724)
Accumulated depreciation on 31 December 2023	<u>\$202,080</u>	<u>\$1,112</u>	<u>\$203,192</u>

The depreciation of \$264,309 includes \$49,056 recorded as project expenses and \$215,253 as administration expenses.

Movements in the right-of use assets for the year ended 31 December 2022 were as follows:

	Office building	Equipment	Total
Right-of-use assets on 1 January 2022	\$613,724	\$0	\$613,724
Additions	-	-	-
Lease contract terminations	-	-	-
Right-of-use assets on 31 December 2022	<u>\$613,724</u>	<u>\$0</u>	<u>\$613,724</u>
Accumulated depreciation on 1 January 2022	\$245,744	\$0	\$254,744
Depreciation	306,862	-	306,862
Lease contract terminations	-	-	-
Accumulated depreciation on 31 December 2022	<u>\$552,606</u>	<u>\$0</u>	<u>\$552,606</u>

The depreciation of \$306,862 includes \$62,391 recorded as project expenses and \$244,471 as administration expenses.

The lease liabilities as of 31 December 2023 and 2022, by maturity were as follows:

Lease liabilities by maturity	2023	2022
Less than one year	\$239,462	\$51,787
Between one and two years	49,544	-
Between two and three years	1,430	-
Between three and four years	1,430	-
Between four and five years	357	-
After five years	<u>0</u>	<u>-</u>
Total lease liabilities	\$292,223	\$51,787
Less current portion of lease liabilities	<u>239,462</u>	<u>51,787</u>
Non-current portion of lease liabilities	<u>\$52,761</u>	<u>\$0</u>

The following table provides additional disclosures related to right-of-use assets and lease liabilities:

	2023	2022
Expenses on short-term leases	\$0	\$0
Expenses on low-value leases	\$3,890	\$4,239
Payments of lease liabilities	\$254,978	\$291,848

**14. Net adjustment for closed projects**

Adjusted revenues and expenses attributed to projects that have already been closed prior to this financial year have been recorded in the account of revenues and expenses retroactive year.

	2023	2022
Revenues	\$0	\$0
Expenses	12,991	(5,115)
Net adjustment gain/(loss) for closed projects (Note 14)	<u>(\$12,991)</u>	<u>\$5,115</u>

**15. Unappropriated surplus**

The 65th GBM held in May 2023 approved \$336,525 by using unappropriated surplus to fund the 2023 budget.

**16. Related party transactions**

Key management personnel compensations for 2023 and 2022 were as follows:

	2023	2022
Short-term employee benefits	\$182,650	\$178,874
Annual leave	18,511	25,870
Severance payment	0	40,093
	<u>\$201,161</u>	<u>\$244,837</u>

# About the APO

Established in 1961, the APO is a regional intergovernmental organization dedicated to enhancing productivity in the Asia-Pacific. From eight founding members, it has grown to include 21 economies: Bangladesh; Cambodia; the Republic of China; Fiji; Hong Kong; India; Indonesia; the Islamic Republic of Iran; Japan; the Republic of Korea; Lao PDR; Malaysia; Mongolia; Nepal; Pakistan; the Philippines; Singapore; Sri Lanka; Thailand; Turkiye; and Vietnam.





Anchored in the APO's mission, the APO Vision 2025 outlines a strategic roadmap for 2021-25 to guide the organization in achieving its three primary goals. It is underpinned by strategic thrusts and detailed key result areas (KRAs) to ensure the effective achievement of its objectives within APO members.

With more than six decades of contributions to improving productivity in the region, the APO's activities involve fostering economic development through knowledge sharing, capacity building, and mutual cooperation among National Productivity Organizations (NPOs), international organizations, experts from the public and private sectors, and academia.



**Mission**

Contribute to the sustainable socioeconomic development of Asia and the Pacific through enhancing productivity.



**Vision 2025**

Inclusive, innovation-led productivity growth in the Asia-Pacific.

**Goals**



Sustained productivity growth



Robust innovative ecosystem



Inclusive engagement and shared prosperity

**Key Result Areas (KRAs)**

- KRA 1.1**  
Centrality of productivity
- KRA 1.2**  
Improved quality of the workforce
- KRA 1.3**  
Smart transformation

- KRA 2.1**  
Business dynamism
- KRA 2.2**  
Innovation capability

- KRA 3.1**  
Increased engagement of SMEs
- KRA 3.2**  
Reduced size of the informal sector
- KRA 3.3**  
Increased participation of women in the workforce
- KRA 3.4**  
Increased engagement of PWDs
- KRA 3.5**  
Productivity gainsharing

**Key Roles**

**Five Key Roles of the APO**



**Think Tank**

The APO conducts research on productivity trends to guide policymaking among its members.



**Catalyst**

The APO promotes multilateral cooperation for greater productivity impacts.



**Regional Adviser**

The APO provides information and advice to members on specialized aspects of productivity.



**Institution Builder**

The APO strengthens NPO capabilities to spearhead productivity agendas.



**Clearinghouse for Productivity Information**

The APO disseminates productivity information in various formats and channels for wider outreach.

## Types of Programs

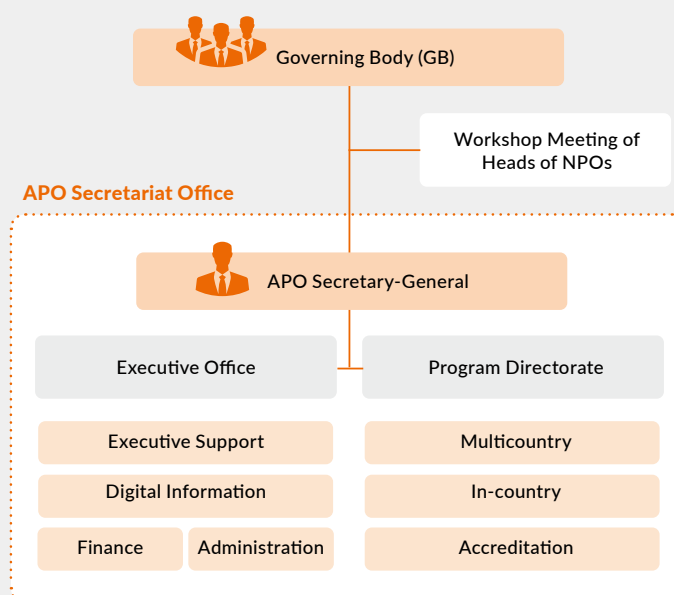
	<b>Multicountry</b>	The Multicountry Program offers practical training, knowledge development, and sharing of best practices and innovations among diverse productivity stakeholders from all APO members. They encompass training courses, workshops, conferences, and observational study missions for the agriculture, manufacturing, public, and service sectors.
	<b>Research</b>	The APO's Research Program conducts in-depth studies and analysis on emerging trends and specific productivity challenges in member economies, leading to actionable recommendations and the formulation of targeted projects.
	<b>Digital Learning</b>	The Digital Learning Program aims to meet the increasing demand for productivity training and skill development through an online platform. This program provides e-courses covering productivity topics related to agriculture, manufacturing, the public sector, and services. Additionally, digital content such as videos, expert discussions, and best practice sharing is available on the APO YouTube channel for the general public.
	<b>Individual-country</b>	The Individual-country Program is designed to offer tailored support to NPOs by strengthening their ability in spearheading the productivity movement and disseminating productivity know-how, techniques, and tools among APO members. Customized to the unique needs of individual economies, this support can be extended to other institutions and organizations upon request by NPOs. The program encompasses a range of initiatives, such as Bilateral Cooperation between NPOs, Centers of Excellence, Certification Body Development, Individual-country Observational Study Missions, Development of Demonstration Companies, Specific National Programs, Technical Expert Services, and more.
	<b>Accreditation</b>	The Accreditation Program recognizes the competency of NPOs or their affiliates as APO-accredited certification bodies. This program cultivates and expands communities of productivity experts and strengthens APO leadership in productivity.

## Organizational Structure of the APO

The APO is structured around three core entities: the Governing Body (GB), NPOs, and Secretariat.

The GB, serving as the APO's highest authority, consists of an appointed director from each member economy. Distinguishing itself from other international bodies, the APO uniquely designates an NPO within each member. These NPOs act as the APO's implementing arm, responsible for coordinating and spearheading productivity-enhancing projects.

Located in Tokyo, Japan, the Secretariat functions as the executive branch of the APO, led by a Secretary-General appointed by the GB. Additionally, the Secretariat engages in collaborative programs with other international organizations, governments, and private institutions to benefit its members.



# APO Directors, Alternate Directors, NPO Heads, and Liaison Officers

As of 31 December 2023

<b>APO Chair</b>	<b>Mr. Sheng-Hsiung Hsu</b> APO Director for the ROC
<b>APO First Vice Chair</b>	<b>Mr. Jone Maritino Nemani</b> APO Director for Fiji
<b>APO Second Vice Chair</b>	<b>Mr. Rajesh Kumar Singh, IAS</b> APO Director for India

## BANGLADESH

### Director

**Ms. Zakia Sultana**  
Secretary, Ministry of Industries

### Alternate Director

**Mr. Muhammad Mesbahul Alam**  
Director General (Additional Secretary), National Productivity Organisation, Ministry of Industries

### NPO Head

**Mr. Muhammad Mesbahul Alam**  
Director General (Additional Secretary), National Productivity Organisation, Ministry of Industries

### Liaison Officer

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Senior Research Officer, National Productivity Organisation, Ministry of Industries

## CAMBODIA

### Director

**Mr. Phork Sovanrith**  
Secretary of State, Ministry of Industry, Science, Technology and Innovation

### Alternate Director

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### NPO Head

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### Liaison Officer

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## ROC

### Director

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## FIJI

### Director

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Permanent Secretary, Ministry of Employment, Productivity and Industrial Relations

### Alternate Director

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### NPO Head

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Pro-Vice Chancellor TVET, Technical and Vocational Education and Training for the Pacific (TVET Pasifika), NTPC Narere Centre, Fiji National University

### Liaison Officer

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Productivity Officer, Ministry of Employment, Productivity and Industrial Relations

## HONG KONG

### Director

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Chairman, Hong Kong Productivity Council

### Alternate Director

**Mr. Thomas Tang**  
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### NPO Head

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## INDIA

### Director

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### Alternate Director

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### NPO Head

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### Liaison Officer

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Regional Director & Group Head (International Services), National Productivity Council

## INDONESIA

### Director

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Secretary General, Acting Director General, Directorate General of Vocational Training and Productivity Development, Ministry of Manpower of the Republic of Indonesia

### Alternate Director

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Deputy Director General (Act.), Directorate General of Vocational Training and Productivity Development, Ministry of Manpower of the Republic of Indonesia

### NPO Head

**Mr. Decky Haedar Ulum**  
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### Liaison Officer

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Deputy Director, Productivity Organizational, Promotion and Cooperation Development, Directorate of Productivity Development, Directorate General of Vocational Training and Productivity Development, Ministry of Manpower of the Republic of Indonesia

## I.R. IRAN

### Director

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### NPO Head

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### Liaison Officer

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## JAPAN

### Director

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### Alternate Director

**Mr. Naoaki Kamoshida**  
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### NPO Head

**Mr. Kazutaka Maeda**  
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### Liaison Officer

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**Alternate Director****Mr. Namho Choi**

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**Alternate Director****Mr. Sa Siriphong**

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**NPO Head****Dr. Bounpheng Sibounheung**

Director General, Department of Small and Medium Enterprise Promotion, Lao National Productivity Organization, Ministry of Industry and Commerce

**Liaison Officer****Mr. Vilakone Philomlack**

Director of Productivity Division, Department of Small and Medium Enterprise Promotion, Lao National Productivity Organization, Ministry of Industry and Commerce

## MALAYSIA

**Director****Datuk Kamaruzzaman Johari**

Chairman, Malaysia Productivity Corporation

**Alternate Director****Mr. Zahid Ismail**

Director General, Malaysia Productivity Corporation

**NPO Head****Mr. Zahid Ismail**

Director General, Malaysia Productivity Corporation

**Liaison Officer****Ms. Abigail Anbalakan**

Assistant Manager, Corporate Secretariat and International Relations, Malaysia Productivity Corporation

## MONGOLIA

**Director****Mr. Yamaaranz Erkhembayar**

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**Alternate Director****Dr. Sharav Munkhtseren**

Head of the Sectoral Policy and Coordination Department, Cabinet Secretariat, Government of Mongolia

**NPO Head****Mr. Yamaaranz Erkhembayar**

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**Liaison Officer****Mrs. Batbileg Tsagaan**

Deputy Director, Mongolian Productivity Organization

## NEPAL

**Director****Mr. Mukunda Prasad Niroula**

Secretary, Ministry of Industry, Commerce and Supplies

**Alternate Director****Mr. Jiblal Bhusal**

Joint Secretary (Division Chief: Planning, Monitoring and Evaluation Division), Ministry of Industry, Commerce and Supplies

**NPO Head****Mr. Deepesh Lekhak**

General Manager, National Productivity and Economic Development Centre

**Liaison Officer****Mr. Ashish Khatri**

Section Officer, Ministry of Industry, Commerce and Supplies

## PAKISTAN

**Director****Mr. Asad Rehman Gilani**

Additional Secretary (Incharge), Ministry of Industries and Production

**Alternate Director****Mr. Asad Islam Mahni**

Additional Secretary-I, Ministry of Industries and Production

**NPO Head****Mr. Muhammad Alamgir Chaudhry**

Chief Executive Officer, National Productivity Organization (NPO Pakistan)

**Liaison Officer****Mr. Muhammad Alamgir Chaudhry**

Chief Executive Officer, National Productivity Organization (NPO Pakistan)

## PHILIPPINES

**Director****Dr. Arsenio M. Balisacan**

Secretary, National Economic and Development Authority

**Alternate Director****Mr. Engelbert C. Caronan, Jr.**

President and CEO, Development Academy of the Philippines

**NPO Head****Mr. Engelbert C. Caronan, Jr.**

President and CEO, Development Academy of the Philippines

**Liaison Officer****Mr. Armand Tristan R. Suratos**

Head, APO/DAP Secretariat, Development Academy of the Philippines

## SINGAPORE

**Director****Ms. Joanne Tan**

Assistant Chief Executive Officer, Capability Programmes and Planning, Enterprise Singapore

**Alternate Director****Ms. Christophane Foo**

Chief Human Capital Officer, Human Capital, Enterprise Singapore

**NPO Head****Mr. Michael Tan**

Chief Executive Officer, Singapore Productivity Centre

**Liaison Officer****Ms. Sim Siling**

Deputy Director, NPO and Special Project, Singapore Productivity Centre

## SRI LANKA

**Director****Mr. R. P. A. Wimalaweera**

Secretary, Ministry of Labour and Foreign Employment

**Alternate Director****Ms. K D R Olga**

Additional Secretary, Ministry of Labour and Foreign Employment

**NPO Head****Ms. K D R Olga**

Additional Secretary, Ministry of Labour and Foreign Employment

**Liaison Officer****Mr. J.D. Niranja S. Jayakodi**

Director, National Productivity Secretariat, Ministry of Labour and Foreign Employment

## THAILAND

**Director****Dr. Nattapol Rangsitpol**

Permanent Secretary, Ministry of Industry

**Alternate Director****Mr. Suwanchai Lohawatanakul**

President, Thailand Productivity Institute

**NPO Head****Mr. Suwanchai Lohawatanakul**

President, Thailand Productivity Institute

**Liaison Officer****Ms. Ratchada Asisonthisakul**

Acting Director, Special Project Promotion Division, Thailand Productivity Institute

## TURKIYE

**Director****Mr. Abdullah Basar**

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**Alternate Director****Ms. Hulya Oztoprak Yilmaz**

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Strategic Research and Planning Department Head, Directorate General for Strategic Research and Productivity, Ministry of Industry and Technology

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Industry and Technology Expert, Ministry of Industry and Technology

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**Director****Dr. Ha Minh Hiep**

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**Alternate Director****Ms. Vu Thi Thu Phuong**

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**NPO Head****Dr. Nguyen Tung Lam**

Acting Director, Vietnam National Productivity Institute

**Liaison Officer****Mr. Doan Anh Vu**

Officer, International Cooperation Department, Directorate for Standards, Metrology and Quality

# List of NPOs As of 31 December 2023

## BANGLADESH



National Productivity Organisation,  
Ministry of Industries

## I.R. IRAN



National Productivity Organization of  
Islamic Republic of Iran

## CAMBODIA



National Productivity Centre of  
Cambodia, Ministry of Industry,  
Science, Technology and Innovation

## JAPAN



Japan Productivity Center

## ROC



China Productivity Center

## ROK



Korea Productivity Center

## FIJI



National Training and Productivity  
Centre, Fiji National University

## LAO PDR



Micro, Small and Medium Enterprise  
Promotion Agency, Lao National  
Productivity Organization, Ministry  
of Industry and Commerce

## HONG KONG

Hong Kong Productivity Council

## MALAYSIA



Malaysia Productivity Corporation

## INDIA



National Productivity Council

## MONGOLIA



Mongolian Productivity Organization

## INDONESIA



Directorate for Productivity  
Development, Ministry of Manpower  
of the Republic of Indonesia

## NEPAL



National Productivity and Economic  
Development Centre



**PAKISTAN** \_\_\_\_\_



National Productivity Organization  
(NPO Pakistan)

**PHILIPPINES** \_\_\_\_\_



Development Academy of the  
Philippines

**SINGAPORE** \_\_\_\_\_



Singapore Productivity Centre

**SRI LANKA** \_\_\_\_\_



National Productivity Secretariat,  
Ministry of Labour and Foreign  
Employment

**THAILAND** \_\_\_\_\_



Thailand Productivity Institute

**TURKIYE** \_\_\_\_\_



Ministry of Industry and Technology

**VIETNAM** \_\_\_\_\_



Vietnam National Productivity  
Institute

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## APPENDIX 1

## LIST OF 2023 PROJECTS

In 2023, the APO implemented a total of 238 projects, including 20 e-courses and 37 P-Talk sessions. As of 31 December, 203 of those projects had been completed, with 35 ongoing. These initiatives benefited 20,893 individuals and 90 organizations, with the engagement of 641 resource persons. Ten completed projects were partially or fully funded by Special Cash Grants. The total number of projects across various modalities was: 137 projects online; 72 projects face-to-face; and 29 projects in hybrid format. Institutional projects are excluded in the summary tables below.

## APO Projects in 2023

Program Category	No. of Projects According to Status		No. of Beneficiaries (Completed Only)		No. of Resource Persons
	Completed	Ongoing	Individuals	Organizations	
Multicountry	88	24	2,443	-	396
In-country	58	11	16,683	90	176
<b>Subtotal</b>	<b>146</b>	<b>35</b>	<b>19,126</b>	<b>90</b>	<b>572</b>
APO e-Course	20	-	1,767	-	24
Productivity Talks	37	-	-	-	44
<b>Total</b>	<b>203</b>	<b>35</b>	<b>20,893</b>	<b>90</b>	<b>641</b>

Focus Area	No. of Projects According to Status		No. of Beneficiaries (Completed Only)		No. of Resource Persons
	Completed	Ongoing	Individuals	Organizations	
I. Centrality of Productivity	28	3	892	-	104
II. Innovation for Productivity	17	0	742	-	71
III. Inclusive Productivity	21	1	707	-	75
IV. Regional Catalyst	82	20	1,981	-	232
V. Strengthening of NPOs and Policy Advisory	55	11	16,571	90	158
<b>Total</b>	<b>203</b>	<b>35</b>	<b>20,893</b>	<b>90</b>	<b>641</b>

## Notes

The figures presented here have been updated as of June 2024 following the reclassification of certain projects.

Multicountry:	This category includes projects open to all member countries, excluding e-courses and Productivity Talks. APO e-courses and Productivity Talks are open to the general public.
In-country:	This category includes projects tailored to specific APO members and include a variety of initiatives like AWD, BCN, CBD, COE, DMP, IOSM, SNP, TES, and VSN.
Completed:	Refers to projects that were fully completed by 31 December 2023. In the context of e-courses and Productivity Talks, it specifically refers to those newly released in 2023.
Ongoing:	Refers to projects that began their implementation phase in 2023 but did not reach completion by 31 December 2023. They are marked with an asterisk (*) in the following sections.
Beneficiaries:	Individuals who directly benefited from and successfully completed APO projects/e-courses and obtained APO certificates and/or organizations that directly benefited from APO projects. Organizations recognized as beneficiaries are specifically applicable to in-country projects such as BCN, CBD, DMP, IOSM, and SNP. A detailed breakdown of participants in e-courses is provided in the dedicated section on the Digital-learning Platform.

## Centrality of Productivity

### Smart Transformation

Project Title	Host	Participants	Resource Persons
Development of Green Productivity 2.0*	APO Secretariat	N/A	N/A
Improvement of Productivity in Greenhouse Vegetable Production*	Vietnam	N/A	2
Observational Study Mission on Microclimate-controlled Greenhouses for Innovative Agriculture	Japan	10	2
Workshop on IoT Applications in Livestock Management	Thailand	21	3
Training Course on Total Quality Management in SMEs	APO Secretariat	36	4
Development of a Training Manual on Digital Manufacturing*	APO Secretariat	N/A	7
Study Mission on Overseas Business Development Assistance to SMEs for Innovative Products and Services	APO Secretariat	20	2
Workshop on Industrial Ecosystems for Digital Transformation	ROC	28	3
Training Course on IoT Applications for SMEs	ROC	23	4
Conference on Productivity Enhancement in the Hospitality Industry	Thailand	32	4
Training Course on Strategic Planning for Sustainable Ecotourism in the Hospitality Industry	Fiji	37	4
Training Course on Data Analytics for SMEs	Singapore	29	5
Training Course on Customer Experience Design for Productivity	Singapore	19	3
Workshop on Business Model Strategies for Startups	Mongolia	25	4
Workshop on Improving Agricultural Productivity through Mechanization	Pakistan	20	3

## Quality of the Workforce

Project Title	Host	Participants	Resource Persons
Conference on Productivity and Green Growth: New Interlocking Paradigms	India	96	6
Development of Public-sector Productivity Specialists	Philippines	22	3
Training Course on Leadership in Public-sector Organizations	Sri Lanka	43	3
Workshop on Future Skill Requirements in the Manufacturing Sector	India	33	7
Training Course on Smart Manufacturing Productivity Specialists	ROC	22	3
Development of Productivity Specialists	Malaysia	26	5
Workshop on the Aging Agricultural Labor Population	ROC	30	5
Multicountry Observational Study Mission on Service Innovation	ROC	44	4
Workshop on Reskilling of the Workforce in the Service Sector	Pakistan	22	5
Development of Public-sector Productivity Specialists	Philippines	40	4
Development of Productivity Specialists	Malaysia	47	3

## Green Productivity

Project Title	Host	Participants	Resource Persons
Workshop on the Green Tourism Certification Framework	Fiji	20	3
Conference on Green Productivity and the Circular Economy	Vietnam	52	3
Multicountry Observational Study Mission on Promoting Green Manufacturing	ROC	35	2
Workshop on True Value and Cost Accounting in Organic Agriculture	Mongolia	35	3
Training Course on Green Productivity	Vietnam	25	4



## Innovation for Productivity

### Robust Ecosystem and Regulatory Framework

Project Title	Host	Participants	Resource Persons
Workshop on Organizational Innovation Management on Key Standards and Frameworks	APO Secretariat	39	4
Training Course on Applications of Behavioral Insights in Regulatory Management	Malaysia	27	4
Workshop on Innovative Public Procurement	Sri Lanka	35	3
Training Course on Design and Evaluation of Innovation Policies	Philippines	25	4
Workshop on Innovation Ecosystems and Social Entrepreneurship	ROK	28	4
Training Course on Cybersecurity Management Systems	ROK	41	5

### Innovation Capability

Project Title	Host	Participants	Resource Persons
Special Program for Capacity Building of Sustainable Food Value Chains for Enhanced Food Safety and Quality in Gampaha District	Sri Lanka	150	4
National Conference on Capacity Building of Sustainable Food Value Chains for Enhanced Food Safety and Quality in Vietnam	Vietnam	100	6
Workshop on Public Service Innovation in the New Normal	Indonesia	35	4
Workshop on Digital Government for Inclusive Public Service Delivery	Cambodia	34	6
Workshop on Agricultural Innovations for Climate Resilience	Japan	35	4
Multicountry Observational Study Mission on the Cashless Society	Sri Lanka	20	3
Workshop on Blockchain Technologies for Business Innovation and Productivity	APO Secretariat	35	4
Conference on Building an Ecosystem for Innovative Entrepreneurship	Vietnam	48	4
Training Course on Knowledge Transfer to Improve Agricultural Productivity	Bangladesh	23	3
Workshop on Food Innovation	Thailand	44	6
Workshop on Green Innovation	Philippines	23	3

## Inclusive Productivity

### SME Development

Project Title	Host	Participants	Resource Persons
Multicountry Observational Study Mission on Best Practices in Lean and Digital Transformation for SMEs	Turkiye	27	4
Training Course on Digital Manufacturing for SMEs	Japan	18	3
Training Course on Productivity Measurement for Digitalized SMEs	ROK	31	2
Workshop on Food Supply Chains in the Informal Sector	Bangladesh	48	3
Multicountry Observational Study Mission on Millennial Leaders to Drive Rural Development	Indonesia	44	2
Conference on Tourism 4.0 for Rural Development	Indonesia	70	6
Training Course on Service Quality Management in the Retail Industry	ROC	23	3
Workshop on the Future of the Creative Economy	Indonesia	36	7
Training Course on Total Productive Maintenance for SMEs	Bangladesh	21	2
Training Course on Smart Transformation for Agribusinesses	Philippines	22	3
Special Account for Business Recovery and Resilience*	All member countries	N/A	N/A

### Broad-based Engagement

Project Title	Host	Participants	Resource Persons
Training Course on Work Design for Inclusive Productivity	India	28	3
Conference on Enhancing Employability of Workers in the Informal Economy	India	27	4
Workshop on Supporting Youth in Entrepreneurship	ROK	19	3
Workshop on Productivity Enhancement for Women Entrepreneurs	Singapore	19	3
Development of Productivity Practitioners among the Youth	Cambodia	32	5
Workshop on Policies for Engaging Persons with Disabilities in Agriculture	APO Secretariat	16	3

Project Title	Host	Participants	Resource Persons
Workshop on Community-based Sustainable Agriculture	Sri Lanka	26	4
Workshop on Social Entrepreneurship for Persons with Disabilities	Lao PDR	22	3
Multicountry Observational Study Mission on Well-being and Productivity	APO Secretariat	46	4
Conference on Women's Leadership in Public-sector Organizations for Productivity Enhancement	Indonesia	104	5

## Productivity Gainsharing

Project Title	Host	Participants	Resource Persons
Training Course on Productivity Gainsharing in Agribusiness Enterprises	Pakistan	28	3

## Regional Catalyst

### Certification and Accreditation

Project Title	Host	Participants	Resource Persons
APO Accreditation Body Council Meeting	Mongolia	N/A	14
Management of the APO Accreditation and Certification Program	APO Secretariat	N/A	31
Training Course for Assessors of the Productivity Specialists Certification Program	Pakistan	22	4
Training Course for Assessors of the Green Productivity Specialist Certification Program	Vietnam	37	3
Workshop on Management of the APO Certification Bodies of Productivity Specialists	Malaysia	43	4

## Digital-learning Platform

### Continued e-Courses

Title	Participants			Resource Persons
	No. Enrolled	No. Completed	No. Passed	
Advanced Course on Data Analytics for the Public Sector	71	7	1	1
Advanced Smart Manufacturing 101 in a Blockchain-driven Era	15	4	2	1
Agribusiness Management (Advanced)	44	14	6	2
Agricultural Insurance for Food Security	30	7	6	1
Agritourism Business Development	61	52	32	1
Apiculture Management	13	3	2	1
Applications of Service Innovation	64	35	24	1
Applying Green Productivity Based on ISO140001 Standards	208	164	125	1
Applying Scientific Knowledge for the Public Sector	33	20	14	1
Basic Data Analytic Course for the Public Sector	83	17	7	1
Basic Smart Manufacturing 101 in a Blockchain-driven Era	8	3	2	1
Behavioral Public Administration	104	57	48	1
Building Climate Change-resilient Agriculture	13	2	0	1
Business Models for Women Entrepreneurs	36	11	9	1
Case Studies on Incorporating Lean Manufacturing into Industry 4.0	198	159	150	1
Climate Change Impacts and Adaptation (Basic)	28	13	8	1
Cloud Solutions for Enhanced Productivity in the Service Sector	16	3	2	1
Controlled-environment Agriculture	15	6	4	1
Critical Strategic Foresight Tools for Sustainable Productivity	23	9	8	8
Development of Social Enterprises for Agribusiness	32	13	8	1

Title	Participants			Resource Persons
	No. Enrolled	No. Completed	No. Passed	
Digital Manufacturing	93	36	28	8
Digital Technologies for Smallholder Farmers	37	15	10	1
Digital Transformation for SMEs	68	30	21	1
Energy Efficiency and Management in Electrical Systems	53	10	6	1
Energy Efficiency and Management in Thermal Systems	42	8	3	1
Energy Efficiency Techniques	34	12	5	1
Energy Management System Auditors' Course	61	23	14	1
Food Safety Management (Advanced)	33	13	8	1
Food Safety Management (Basic)	53	12	6	1
Future Aquaculture Farming	9	2	0	1
Future Food: Exploring Business Opportunities	17	0	0	1
General Aspects of Energy Management and Audit	114	74	67	1
Generating Energy Sustainably	115	55	42	1
Good Agricultural Practices (GAP)	43	10	2	1
Green Productivity and Integrated Management System	73	23	3	1
Green Productivity Tools and Techniques	234	113	80	4
Hydroponic Farming	78	31	23	1
Innovations in Agroforestry Systems	16	4	1	1
Innovative Cost-effective Technologies for Sustainable Agriculture	3	0	0	1
Integrating Lean Manufacturing Systems and Industry 4.0 Concepts	91	57	50	1
Management of Innovation in SMEs	37	14	10	1
Management of Plant Factories	45	25	20	1



Title	Participants			Resource Persons
	No. Enrolled	No. Completed	No. Passed	
Marketing Strategy and Product Branding for SMEs	29	17	12	1
Material Flow Cost Accounting (ISO 14051)	26	11	5	1
Measurement of Public-sector Productivity	42	5	4	1
Modern Food Distribution Systems	13	4	3	1
Modern Food Retailing	39	18	13	1
Modern Food Storage and Transport Technologies	17	3	2	1
Occupational Health and Safety Management System (OHSAS 18001)	247	182	169	1
Organic Agriculture and Organic Agribusiness	14	3	3	1
Organic Inspection and Certification	18	8	8	1
Productivity Tools and Techniques (Advanced)	211	141	135	1
Productivity Tools and Techniques (Basic)	185	57	36	1
Public-sector Innovation Labs	86	22	15	1
Regulatory Management Systems	82	43	23	1
Rural Entrepreneurship Development	20	7	5	1
Service Design Thinking for SMEs	23	7	5	1
Service-sector Productivity and Innovation for the Digital Economy	29	11	4	1
Service-sector Transformation in Industry 4.0	50	21	20	1
Smart Farm Mechanization	36	24	23	1
Smart Manufacturing (Advanced)	10	1	0	1
Smart Manufacturing (Basic)	14	3	1	1
Smart Transformation of Agriculture	35	18	13	1
Sustainable Fisheries	39	20	12	1

Title	Participants			Resource Persons
	No. Enrolled	No. Completed	No. Passed	
Sustainable, Resilient Supply Chains and Integration into Global Value Chains	147	84	32	1
Urban Agriculture	13	3	1	1
Waste Management in Agribusiness	39	1	1	1

### Courses released in 2023

Title	Participants			Resource Persons
	No. Enrolled	No. Completed	No. Passed	
Blockchain Solutions for Improving Productivity in Agriculture	72	15	13	1
Data Analytics for SMEs	106	42	31	1
Data Modeling for Productivity Improvement	49	12	7	1
Digital Innovation Processes in the Public Sector	66	17	12	1
Digital Marketing Strategies	58	19	13	1
Ecodesign and the 3Rs	21	5	4	1
Effective e-Commerce Strategies	32	8	5	1
Enabling Regulations for Agricultural Innovation	69	38	28	2
Food Bakery Entrepreneurship Development	147	44	42	1
Human Resources Strategy for the Public Sector	77	38	26	1
Inclusive Leadership in the Public Sector	8	6	5	1
Managing Demographic Transition and Its Impacts	13	5	3	4
Measuring and Analyzing Productivity Gains for SMEs	150	74	41	1
Platform Businesses in the Service Sector	10	4	3	1
Productivity Measurement in the Service Sector	43	14	8	1
Public-sector Strategic Management	90	31	20	1
Regulating Emerging Technologies	8	5	4	1

Title	Participants			Resource Persons
	No. Enrolled	No. Completed	No. Passed	
Smart Livestock Value Chains	153	83	76	1
Value-added Fruit Products	90	26	20	1
Workplace Digitalization in Public-sector Organizations	18	8	4	1

### APO Productivity Talks

Title	Resource Persons
Demographic Challenges in the Asian Region	1
Japan's Resilient Agriculture	1
Knowledge Management and Innovation	1
Innovative, Sustainable Beekeeping	1
The IoT for Higher Productivity	1
Unlocking the Power of Innovation for Productivity	1
Rapid Cost Reduction Approaches for SMEs	1
Knowledge Management: A Basic Ingredient for Productivity	1
Untold Essence of the Toyota Production System (TPS)	2
Startup-centric Innovation	1
The Community Enterprise Approach for Productivity Gainsharing	1
Innovation Ecosystems to Drive Productivity	2
Productivity Improvement through New Technologies	1
Big Data Analytics and Visualization for Productivity	2
From Lean to Smart Manufacturing	1
Climate Actions in the Asian Agricultural Sector	1
mymizu: A Sustainable Solution for Reducing Plastic Waste	1

Title	Resource Persons
Public-sector Productivity: Challenges and Opportunities	2
Transforming Tourism Postpandemic	1
Tourism for Today and Tomorrow in Thailand	2
Enhancing Productivity and Sustainability through Ecoindustrial Parks	1
Overtourism: Potential Short- and Long-term Solutions	1
Developing Productive Global Talent	1
Design, Productivity & Co-creation: Design in the ROC	2
Productivity and Stakeholder Value Creation	2
The Future of Work: What Lies Ahead in Boosting Productivity	1
Boosting Productivity through Blockchain Technologies	2
Managing Emotions for Productivity in Entrepreneurial Organizations	1
SME Transformation for Meeting the SDGs in Asia	2
Inclusive Rural Development through Expansion of Agricultural Value Chains	1

### APO Productivity Gemba

Title	Resource Persons
Smart Farming (Paddy Rice)	N/A
Sustainable Food Value Chains	N/A
Gemba Walk	1
Quality and Made in Japan	1
Omotenashi	1
Digitalizing Productivity	1
Kaizen in the Service Sector	1

## Research and Program Development

Title	Resource Persons
Research on Reskilling Workers to Enhance Labor Productivity	6
Research on Smart Agricultural Transformation for APO Member Countries	5
Research on Hotel Productivity	1
Research on Digital Disruption: Policy Tasks and Responses by Governments	1
Research on Labor Market Policies for Changing Market Demands	11
Research on Innovation-led Productivity Growth for Middle-income Trap Avoidance	5
Research on an Aging Asia and Pacific: Preparing for the Future	3
Research on Emerging Needs of APO Member Economies*	7
Productivity Analysis Series (2023)	3
APO Productivity Databook and Database	18
APO Productivity Outlook 2023	1
Research on the Productive Employment Index*	9
Research on SME Transformation for Meeting the SDGs	13
Research on Inclusive Innovation Policies for Economic Growth	6
Research on National Innovation Systems in Developing APO Members	5
Review of Productivity Assessment Tool for the Agriculture Sector*	5
Research on Emerging Needs of APO Member Economies*	4
Research on the Informal Sector in APO Member Countries: Issues and Challenges	10
Research on Institutional Ecosystems to Drive Productivity*	9
Policy Study on Productivity-enhancing Structural Transformation in Lower Middle-income Countries	1
Policy Study on Productivity-enhancing Economic Structural Change in Upper Middle-income Countries	1
Policy Study on Productive Economic Structures in High-income Countries	1

Title	Resource Persons
Productivity Analysis Series (2024)*	1
APO Productivity Outlook 2024*	1
Research on the Informal Economy and Productivity Growth*	11
Research on Premature Deindustrialization and Productivity Performance*	9
Research on New Dynamics of Global Supply Chains and Implications for Productivity*	9
APO Productivity Databook and Database 2024*	18
Research on Agile Working Styles for Productivity*	7
Research on Measuring the Institutional Capacity of Key Productivity-promoting Institutions in APO Members*	1
Research on Agricultural Productivity in Asia*	1
Research on Assessing Needs of APO Members*	6
Research on New Productivity Tools in Agriculture*	1
Research on New Productivity Tools in the Public Sector*	1
Research on Strategic Modeling for Future Agriculture in Asia*	1
Research on Emerging Trends in APO Members*	12
Research on Public-sector Performance Management in the APO members*	9

### Centers of Excellence

Title	Host	Participants	Resource Persons
Need and Readiness Assessment Survey for Implementing Climate-change Mitigation and Adaptation Technologies in Agriculture	APO Secretariat	N/A	8
Strengthening Program for the APO Center of Excellence on Climate-smart Agriculture	ROC	2	2
International Conference on Climate-smart Agriculture	Japan	110	8



## Strengthening of NPOs and Policy Advisory

### Bilateral Cooperation between NPOs

Title	Deputing Country	Host	Resource Persons	Organizations
Strategic Foresight and Innovation Management	Fiji	Thailand	0	2
Benchmarking Study on Evaluation System of the Fiji Quality Awards	Bangladesh	Fiji	0	2
Productivity Enhancement for SMEs and Organizational Best Practices of Productivity-promoting Institutions	Nepal	Mongolia	2	2
Best Practices in Learning Factories	Turkiye	Malaysia	2	2
Smart Services and Manufacturing for the Elderly Industry	ROC	Singapore	0	2
Innovation, Digital Transformation, and Productivity Improvement	Fiji	Singapore	1	2
Sharing ESG Experiences and Information	ROK	Thailand	0	2
Best Practices and New Initiatives on Productivity and Green Growth	India	ROC	0	2
Benchmarking the Best Practices of a Successful Certification Body	Pakistan	Vietnam	0	2

The reported number of organizations refers to participating NPOs.

### Individual-country Observational Study Missions

Title	Deputing Country	Host	Resource Persons	Organizations
Best Practices in Public-sector Productivity	Turkiye	Japan	2	5
Green Productivity for Circular Economy Development	Vietnam	ROC	1	3
Industry 4.0 in SMEs	Fiji	India	2	4
Industrial Policies and Practices: Advancing the Industrial Economy in the Digital Age	Thailand	ROK	2	2
Environmental, Social, and Governance (ESG)	ROC	ROK	1	2
Public-sector Productivity Development in the ROK	Turkiye	ROK	1	5
The ROK's Research and Development Journey	Malaysia	ROK	2	2

Title	Deputing Country	Host	Resource Persons	Organizations
Productivity Improvement through Good Regulatory Practice	Vietnam	Malaysia	2	3
Productivity-linked Wage System (PLWS)	Bangladesh	Malaysia	2	2
Best Practices of Fruits, Gems, and Jewelry Industries in Thailand	Pakistan	Thailand	0	5
Smart Factory Transformation	Malaysia	ROC	0	30
Innovation Management	Philippines	Vietnam	2	1

The reported number of organizations corresponds to the entities participants represented.

## Certification Body Development

Title	Host	Resource Persons	Participants	Organizations
<b>Productivity Specialist Certification Scheme</b>				
Development of the National Productivity Organisation, Bangladesh, as an APO Certification Body*	Bangladesh	1	15	1
Development Project for the National Productivity Council (NPC), India as an APO Certification Body	India	4	20	1
Development of the National Productivity Organization of the Islamic Republic of Iran as an APO Certification Body	I.R. Iran	N/A	N/A	1
Development of the National Productivity Organization of Pakistan (NPO Pakistan) as an APO Certification Body	Pakistan	2	4	1
Development of the National Productivity Secretariat, Sri Lanka, as an APO Certification Body*	Sri Lanka	1	10	1
Development of Turkish Management Sciences Institute (TUSSIDE) as an APO Certification Body*	Turkiye	N/A	N/A	1
<b>Green Productivity Specialist Certification Scheme</b>				
Development Project for the Directorate of Productivity Development (NPO of Indonesia) as an APO Certification Body	Indonesia	2	9	1
Development of the Singapore Productivity Centre as an APO Certification Body*	Singapore	1	7	1
Development of the Thailand Productivity Institute as an APO Certification Body*	Thailand	3	33	1

The reported number of organizations refers to established Certification Bodies, whereas the number of participants refers to staff involved in the development of CBs. For I.R. Iran and Turkiye, no resource persons were assigned in 2023.

## Specific National Program

Title	Host	Resource Persons	Organizations
Development of the Monitoring and Evaluation Framework of the National Productivity Master Plan for Bangladesh*	Bangladesh	1	1
Development of the National Productivity Master Plan for Sri Lanka*	Sri Lanka	7	1
Development of Innovation Management Policy Framework for MSMEs in the Philippines*	Philippines	2	1
Institutional Capacity Development Plan for the Vietnam National Productivity Institute: Phase 2	Vietnam	2	1

The reported number of organizations refers to those requesting assistance from the APO Secretariat. Due to the program's national-level scope, it is important to note that as an SNP project progresses, additional stakeholders may also benefit from this program.

## Technical Expert Services

Title	Host	Resource Persons	Participants
Basic Productivity Tools and Techniques for Bangladesh	Bangladesh	1	50
Occupational Health and Safety Management Systems (OHSMS) ISO 45001 Lead Implementer in Heavy Industry	Mongolia	1	20
Design, Development, and Implementation of Competency Framework for Regulators	Philippines	1	20
Capacity Building on Export Compliance for Electrical Equipment Sector	Pakistan	2	102
Promotion of Green and Circular Economy in Turkish Free Zones	Turkiye	3	100
International Conference on Smart Agriculture	ROC	2	150
Sustainable and Innovative Beekeeping	Vietnam	1	17
Industry 4.0	Bangladesh	2	25
Productivity Measurement	Fiji	1	91
Lean Six Sigma Green Belt	Fiji	1	29
High-performance Culture in Public Sector	Indonesia	1	200
Communities of Excellence	Japan	2	208
Training of Consultants and Trainers on HACCP and Food Safety Management Systems (FSMS)	Cambodia	1	46
System-based Incubation Programs	Cambodia	2	35

Title	Host	Resource Persons	Participants
Training of Trainers on Food Safety Management for Sri Lanka	Sri Lanka	1	48
Innovative Beekeeping Practices for Sustainable Apiculture	Nepal	1	60
Public-sector Value Chains for the Philippines	Philippines	2	35
Blue Ocean Strategy and Leadership for the Philippines	Philippines	2	19
Dynamic Leadership and Human Resource Management	Philippines	1	6,541
Development of 5S Lead Auditors	Pakistan	2	25
Training on TQA Assessor Calibration	Thailand	1	288
Increasing Efficiency of Provincial Disaster Management	Turkiye	3	330
Improvement of Public Sector Efficiency using Blockchain-based Database	Turkiye	2	38
The Revolution in Decarbonization: Rebuilding Corporate Sustainable Competitiveness	ROC	2	28
Vietnam National Productivity Forum	Vietnam	4	700
Assessment of Vietnam's GRP Implementation	Vietnam	2	50

## Demonstration Companies

Title	Host	Resource Persons	Organizations (Demonstration Companies)
Productivity Improvement in Energy and Mining Sectors through Knowledge Management	Mongolia	1	3
Application of Lean Management Systems in the Chemical Industry*	Bangladesh	1	3
Productivity Improvement in Manufacturing SMEs*	Sri Lanka	1	3
Workplace Environment Management through Lean Manufacturing in the Surgical Instruments Industry*	Pakistan	2	5

The reported number of organizations refers to established demonstration companies.

## Vision 2025 Outreach Program

Title	Host	Resource Persons	Participants
APO Vision 2025 Outreach (VSN)	Bangladesh	9	2,000
	Japan	19	27
	ROK	11	1,000
	Lao PDR	25	3,350
	Mongolia	4	152
	Singapore	4	80
	Thailand	9	700

## APO National Program

Title	Host	Awardees
APO National Awards (AWD)	India	2
	I.R. Iran	1
	Mongolia	2
	Sri Lanka	2

## APPENDIX 2

## SUMMARIES OF 2023 PROJECTS

## Centrality of Productivity

**i. Smart Transformation****Development of Green Productivity 2.0**

In response to current global sustainability initiatives aligned with the principles of Green Productivity (GP), the APO commenced a project funded by a Special Cash Grant from the Government of Japan on Development of GP 2.0 in 2021. The objectives are to revisit the GP concept and upgrade its tools, techniques, and methodologies; broaden the scope of applications of GP in response to current pressing challenges; and mainstream GP and strengthen its links with other international initiatives for environmental sustainability and productivity enhancement. Upon approval by the Governing Body, the GP Advisory (GPA) Council and a Technical Working Group (TWG) were set up to provide strategic advice and technical inputs. The GPA Council is chaired by Prof. Emeritus Ryoichi Yamamoto, The University of Tokyo. The TWG is chaired by Dr. Chun-Hsu Lin, Director and Research Fellow, Center for Green Economy, Chun-Hua Institution for Economic Research, ROC, and includes members from I.R. Iran, Malaysia, Pakistan, the Philippines, Thailand, and Vietnam. The TWG is developing a GP 2.0 roadmap and identifying corresponding action plans, methodologies, and projects.

In 2023, the activities of this project mostly involved the TWG. They included mapping of GP initiatives in APO members to identify the gaps and gauge current issues and trends; identify and prioritize the approaches and corresponding enablers/technologies; and eventually develop a roadmap including activities to be carried out to expand the coverage of the GP concept to various sectors such as agriculture, services, and consumption besides strengthening activities pertaining to the manufacturing sector. The projects proposed under the GP 2.0 roadmap also aim to strengthen the APO certification scheme for the Development of Certified GP Specialists.

The activities will continue in 2024 and are expected to be completed in April. The draft report is expected to be presented to the 66th Session of the APO Governing Body for endorsement.

**Improvement of Productivity in Greenhouse Vegetable Production**

Vegetable demand in Vietnam has diversified as more produce is being processed, frozen, and exported. Vegetable production must be increased and quality adjusted to meet various demands. In addition, improving labor productivity in vegetable production is a crucial factor to increase quality. Production in greenhouses controls the growing environment and labor input, while raising productivity and quality.

To promote the productivity and quality of vegetable production in Vietnam, the APO in cooperation with STAMEQ developed a plan to establish a demonstration farm with a greenhouse microclimate control system using smart technology applications in Lam Dong. One medium-sized farm prepared for the installation of a microclimate control system in a greenhouse, guided by two resource persons from Japan who shared knowledge on advanced greenhouse production techniques.

**Program coverage:** *Advanced greenhouse vegetable production; and High-end technology for microclimate control and labor input systems.*



### Observational Study Mission on Microclimate-controlled Greenhouses for Innovative Agriculture

Vegetable demand in Vietnam has diversified, although production in Vietnam is not high and cutting labor costs is an important issue. To meet such requirements, precise vegetable production control is needed.

The APO initiated a demonstration farm project on Improvement of Productivity in Greenhouse Vegetable Production in October 2022. As part of the project, an OSM on Microclimate-controlled Greenhouses for Innovative Agriculture was organized 8–10 February for the 10 counterpart staff in Vietnam to understand the mechanisms of control and microclimate data collection and analysis. The mission visited Kikuchi Engei, a selected farm and plant factories operated by the Japan Plant Factory Association, since it is important to learn about and observe best practices before installing microclimate control systems. The opening session was attended by the APO Secretary-General and Director for International Agricultural Organizations, Ministry of Agriculture, Forestry and Fisheries (MAFF) of Japan.

This project is partially funded by MAFF under a special cash grant to demonstrate microclimate control systems used by Japanese greenhouses. Two resource persons conducted the project activities.

### Workshop on IoT Applications in Livestock Management

The UN FAO reported in 2019 that the global demand for livestock products was anticipated to double by 2050, most of which was expected in developing countries. The sector needs innovation to boost production with limited land and resources. In addition, the sector must achieve sustainability without causing irreparable environmental damage or exceeding global resources. The adoption of IoT and associated digital technologies is a key enabler to achieve both productivity and sustainability. It assists precision livestock farming (PLF) by collecting information for taking actions in a timely, precise manner for individual animals, herds, or flocks as needed. Through IoT applications, farmers can significantly improve the way they manage livestock farming.

In collaboration with the FTPI, a face-to-face workshop on IoT Applications in Livestock Management was implemented 20–23 February in Bangkok. Twenty-one participants from 15 APO members attended. Three resource persons from Belgium, Japan, and Thailand shared the latest status of IoT applications in case studies of poultry, cattle, pig, and aquaculture operations. In addition, participants visited modern poultry and fish farms to learn about the latest commercial applications of IoT technologies and discussed how to adopt PLF in member economies, especially by small farmers.

**Program coverage:** Overview of IoT technologies and the concept of PLF; PLF applications in poultry farming; and PLF applications in cattle and pig farming and aquaculture. Field visits were made to CPF Saraburi Chicken Processing Plant and Khaopong Farm.

### Training Course on Total Quality Management in SMEs

With evolving customer requirements, improving and maintaining quality are continual processes rather than goals. They require implementation of a framework involving all employees with commitment from top management to work toward quality improvement. Total quality management (TQM) is a widely applied management approach in the manufacturing, service, agriculture, and public sectors. It is based on robust frameworks including principles and tools to guide enterprises in detecting and eliminating defects, addressing issues across supply chains, improving customer experiences, and enhancing the skill levels of employees. Different management approaches like lean manufacturing and Six Sigma with cross-sectoral relevance have emerged from TQM. The ISO 9000 family of quality management standards also has interlinkages with TQM.

A training course on Total Quality Management in SMEs was implemented from 30 January to 2 February in the online modality by the APO Secretariat. Thirty-six participants from 14 APO members successfully completed the course. Four resource persons, two from I.R. Iran, and one each from Malaysia and Singapore delivered presentations highlighting quality improvement as an important tool for overall business growth, focusing on case studies, best practices, and benefits of implementing TQM. They also shared recent technological and digital advances in quality management from the SME perspective.

**Program coverage:** *Defining quality and its contribution to business growth; Understanding quality, productivity, and competitiveness; Understanding the concept of TQM; Quality tools and techniques; TQM implementation approaches in SMEs; TQM and innovation management; Digital transformation and the future of quality; TQM elements and the Business Excellence framework; and Conducting training and consultancy activities on TQM in SMEs.*

### Development of a Training Manual on Digital Manufacturing

The APO has organized a series of capacity-building projects to develop productivity specialists. The contents were mainly developed based on conventional productivity tools and techniques in conducting company diagnosis and providing recommendations for improvement. With digitalization now essential to sustain productivity, it is crucial for productivity practitioners to upgrade their knowledge and capability. With the support of a special cash grant from the Government of the ROC, the APO collaborated with the CPC and JPC to develop new modules and a training manual to enhance the capability of productivity practitioners by adding knowledge on digital tools and applications.

A total of seven resource persons from the ROC and Japan were assigned to develop the manual. With the ROC as the APO COE on Smart Manufacturing and JPC the host of multicountry projects on digital manufacturing since 2021, the composition of experts will be beneficial for the development of this training manual. The manual is expected to be ready for utilization by May 2024.

**Program coverage:** *Basic concepts and terminology of the IoT; Understanding kaizen and IoT applications; Case studies of kaizen and the IoT; Technology: Data acquisition and storage through sensors, visualization, analysis, and system construction; and Project management tools.*

### Study Mission on Overseas Business Development Assistance to SMEs for Innovative Products and Services

Sustainability is becoming increasingly important in the Asia-Pacific region for many reasons, including environmental concerns, social responsibility, and economic benefits. Sustainable business models are better positioned for long-term success in the region to create a comparative advantage. With a culture of innovation and history of enforcing environmental laws, Japan has a strong focus on sustainability and is one of the leading producers of sustainable goods and services. Japanese SMEs play an important role in developing green products and promoting sustainability.

The APO Secretariat organized a study mission on Overseas Business Development Assistance to SMEs for Innovative Products and Services, 6–8 December in Japan, which was attended by 20 participants from 17 members, facilitated by two local resource persons. This project was funded by a special cash grant from the Government of Japan. In addition to a study tour to the Eco-Pro 2023 exhibition, two SMEs, Wash Plus Co. and Kamakura Seisakujo Co., hosted site visits.

**Program coverage:** *Study tour to the Eco-Pro 2023 exhibition to create business-matching opportunities; and conference with APO resource persons and participants to examine the circular economy, sustainable business models, and GP status. Site visits to Wash Plus Co. and Kamakura Seisakujo Co. demonstrated how Japanese SMEs produce sustainable products and incorporate circular economy concepts to create sustainable business models and marketing practices.*

### Workshop on Industrial Ecosystems for Digital Transformation

APO members have been undertaking digital transformation and establishing conducive ecosystems. One common strategy is promoting digitalization of manufacturing and SMEs with the assistance of technology providers, business advisers, research institutes, and other partners. As digital technologies become more affordable, industrial clusters and value chains also evolve. With industry landscapes becoming more complicated, dynamic, and connected, this workshop provided references for digital transformation strategies and how organizations can leverage industrial ecosystems and their stakeholders for sustained transformation and higher productivity.

To benchmark against strategies for the development of digital transformation ecosystems and examples of industrial ecosystems, the APO Secretariat collaborated with the CPC in organizing an online workshop on Industrial Ecosystems for Digital Transformation, 16–18 August, to discuss how industrial ecosystems influence businesses and individuals and how governments, organizations, and employees could respond to the implications of such dynamics. Twenty-eight participants from 12 APO members completed the workshop, where three resource persons from the ROC, Germany, and the ROK presented examples from various countries and organizations and led discussions on effective strategies for businesses and individuals to connect and upgrade in industrial ecosystems.

**Program coverage:** *Digital transformation: An ecosystem approach; National strategies for digital transformation; Value chains and industrial ecosystems; Industrial ecosystems and digital transformation: Examples from manufacturing and IT sectors; Implications for businesses and government strategies; and Industrial ecosystems for digital upgrading: Examples from the ROC.*

### Training Course on IoT Applications for SMEs

Connecting machines and devices physically and digitally is the foundation of smart manufacturing and one of the first steps in digital transformation. The IoT can help to collect and share data generated in all business processes and is effective in monitoring quality, optimizing operations, and thus improving productivity. The adoption of the IoT has become an indispensable step for businesses to stay competitive. As IoT technologies become more accessible, SMEs are in better positions to embrace simple, effective IoT applications. However, many do not have enough expertise to deploy IoT technologies or strategies for using data and connectivity. Assisting SMEs in understanding IoT technologies and initiating IoT adoption is thus necessary for effective digital transformation in industries.

To assist APO members in initiating and sustaining digital transformation of SMEs, the APO Secretariat collaborated with the CPC to conduct a training course on IoT Applications for SMEs, 24–28 July, to build SMEs' capabilities in leveraging IoT technologies. Twenty-three participants from 16 APO members completed the training course, where four resource persons, two from the ROC and two from Singapore, led the discussions on crucial topics related to the IoT and guided participants in learning about IoT technologies and applications through hands-on exercises and mock projects.

**Program coverage:** *The IoT and smart factories; IoT trends and applications; The IoT and data analytics; Applying the IoT for an ESG dashboard; The industrial IoT and cybersecurity; and Case study: Data-based strategy making. Site visits to DigiWinSoft 5G AIoT Experience and Experiment Base and Victor Taichung Machinery included hands-on exercises with sensors, the Internet, and data analysis and visualization.*

### Conference on Productivity Enhancement in the Hospitality Industry

The COVID-19 pandemic had a significant impact on the hospitality sector, particularly hotels, airlines, and travel. The hospitality sector is still rebuilding from pandemic losses, while limitations on direct human contacts, currency fluctuations, and increased fuel and electricity prices are anticipated to persist. Yet, where movement restrictions were lifted, tourist numbers increased. The hospitality

industry is urged to embrace an innovative mindset for reconstructing sustainable business models for the long term in addition to recovering more quickly from the pandemic over the short term.

In collaboration with the FTPI, the APO Secretariat organized an online Conference on Productivity Enhancement in the Hospitality Industry on 7 June, which was attended by 32 participants from 14 member economies. It was facilitated by four resource persons, one from Thailand, one from Singapore, one from Fiji, and one from Japan. All four resource persons were newly recruited for this conference.

**Program coverage:** *Rethinking the hospitality sector for the post-COVID-19 era; Improving service quality during the pandemic; Initiatives to counter problems in hospitality (tourism, hotels, and air-lines) such as meeting the SDGs, climate action, and technological investment including the introduction of Vouch; and Case studies from Thailand, Fiji, Singapore, and Japan.*

### Training Course on Strategic Planning for Sustainable Ecotourism in the Hospitality Industry

As international tourism rebounded to 80% of pre-COVID-19 levels in the first quarter of the year, many countries are shifting toward sustainable practices such as ecotourism, responding to the growing demand from tourists for such experiences. Effective capacity building in strategic planning and digital marketing can equip stakeholders to adapt to this changing landscape and develop the sustainable tourism sector.

The APO Secretariat organized an online training course on Strategic Planning for Sustainable Ecotourism in the Hospitality Industry hosted by the NTPC, Fiji National University, 18–21 July. It was attended by 37 participants from 13 APO members. Four resource persons from Fiji, Hong Kong, Japan, and the Philippines gave presentations and facilitated the course, three of whom were collaborating with the APO Secretariat for the first time.

**Program coverage:** *Overview of sustainable ecotourism; Introduction to strategic planning tools and methodologies; Designing strategic planning for ecotourism; Best practices of sustainable tourism and ecotourism; Community-based ecotourism; Climate change in sustainable tourism; The disruption era of sustainable ecotourism challenges and opportunities; and Digital marketing strategies for ecotourism including SEO/SEM, social media marketing, and Web 3.0 marketing.*

### Training Course on Data Analytics for SMEs

Digital upgrading is essential for SMEs to improve productivity and stay competitive. The foundation of this transition is data generated from all aspects of operations, which, through effective collection, analysis, and visualization, enable informed decisions, optimize management, and predict demand. It is necessary to strengthen the capabilities of SMEs in acquiring and analyzing data.

To strengthen the capabilities of SMEs in using data for management, decision-making, and productivity enhancement, the APO Secretariat collaborated with the SGPC in organizing an online training course on Data Analytics for SMEs, 26–29 September, to share trends and technologies related to data analytics and tools and methodologies for SMEs to use data. Twenty-nine participants from 11 APO members completed the training course. Five resource persons from the ROC, the Netherlands, and Singapore explained applications of data analytics and led hands-on exercises to familiarize participants with effective data analytics tools available.

**Program coverage:** *Data and digital transformation in SMEs; Data thinking: Identifying and solving problems with data; AI, machine-learning, and deep-learning applications for SMEs; Basic data collection and processing; Manufacturing data science; Data visualization; Data analytics for SMEs: Applications from beyond the manufacturing sector; and Data analytics for SMEs: Use cases and tools.*

### Training Course on Customer Experience Design for Productivity

Customers' priorities have recently shifted due to external factors such as the pandemic, inflation, and climate change. These have altered how customers engage with purchases, and customer experience (CX) design has also shifted to meet their changing expectations. Customers often use the internet to research products, make purchases, and provide feedback via social networking sites; as a result, it is important to involve them and make them feel important during the purchasing process. By avoiding repetition and/or utilizing personalized interactions, human-centered technologies raise consumer satisfaction levels.

The SGPC and APO Secretariat organized a face-to-face training course on Customer Experience Design for Productivity, 19–23 June, which was attended by 19 participants from 17 member economies. It was facilitated by three resource persons, two from Singapore and one from Japan.

**Program coverage:** *Designing quality products and services based on CX; Tools and methodologies to design products and analyze customer persona; Improving customer support services; and Overview of CX design in the public and private sectors. Site visits were hosted by the Nanyang Polytechnic School of Design & Media and Novotel/Mercure Singapore at Stevens.*

### Workshop on Business Model Strategies for Startups

Business models are sets of methods to create, deliver, and capture value by serving customer and market needs. They can create competitive advantage, generate better returns, and identify innovative opportunities. Productivity plays a vital role in successful startups, which must make the most of limited resources, by incentivizing employees and fostering an environment for collaboration.

A face-to-face workshop on Business Model Strategies for Startups was implemented 15–18 May, hosted by the MPO in Ulaanbaatar. Twenty-five participants from 17 APO members attended. Four resource persons from France, India, the ROK, and Mongolia gave presentations covering aspects of lean startup concepts, business model canvas tools, methods for creating business models, and system-based thinking models. Participants were divided into groups to develop innovative business models suitable for Mongolia based on the learning from the resource persons and site visits. Each group was given an opportunity to pitch its business model, and excellent ones were recognized.

**Program coverage:** *Overview of business models; Lean startup concepts; Business model canvas; Types of methods for creating business models; Importance of productivity for a successful startup; Strategies for increasing productivity in startups; and Pitching a business model. Site visits were made to the Mongolian Fund of Science & Technology, National IT Park, and Hub Innovation Center of the Capital City.*

### Workshop on Improving Agricultural Productivity through Mechanization

Small farmers play an important role in most developing countries and communities. However, they often face a lack of resources and labor, making it difficult for them to conduct efficient farming operations. Mechanization is a key factor for improving productivity through automation of agricultural processes and complementing labor.

In collaboration with the NPO, Pakistan, a face-to-face workshop on Improving Agricultural Productivity through Mechanization was implemented 6–9 November in Lahore. Twenty participants from nine APO members attended. Three resource persons from Japan, Pakistan, and Thailand covered aspects of improving agricultural productivity through mechanization including overview, methodologies, tools, and case studies. Participants developed action plans based on the course contents, site visits, and discussion sessions.

**Program coverage:** *Overview of mechanization to improve agricultural productivity frameworks,*

tools, approaches, and benefits; and Case studies of mechanization activities in Japan, Pakistan, and Thailand. Site visits were made to agricultural machinery producers in Lahore.

## ii. Quality of the Workforce

### Conference on Productivity and Green Growth: New Interlocking Paradigms

The overdependence on fossil fuel to meet energy needs and the existing “take-make-waste” model of industrialization have adversely impacted the environment through climate change and pollution. Efforts such as the Glasgow Climate Pact 2021 adopted during COP26 pursue limiting the global temperature rise to 1.5°C. The theme of India’s G20 presidency of “One Earth · One Family · One Future” emphasizes the value of all life forms and aims to create a cleaner, greener, bluer future. The APO’s Green Productivity (GP) concept embraces environmental protection while simultaneously enhancing productivity and quality at enterprise level.

An international conference to commemorate the 60th Anniversary of the APO was organized 14–16 June in Chennai, India. It promoted greener growth and focused on productivity enhancement in government policies. Hosted by the NPC, India, 96 participants from 16 APO members attended. Presentations were delivered by six resource persons from India, the ROK, Singapore, and USA.

**Program coverage:** Green finance presentations by resource persons; Country papers by participants; and Panel discussion on drivers of and barriers to the green economy. A site visit to an engineering solutions provider was made to showcase sustainability initiatives and best manufacturing practices in workforce safety and lowering environmental impacts.

### Development of Public-sector Productivity Specialists

Many governments have undertaken reforms to improve the overall efficiency and effectiveness of public resources, increase accountability and transparency, and enhance the responsiveness of public-sector organizations to citizens’ needs. This emphasizes the importance of performance improvement in public-sector organizations to enhance productivity. While advances in technology adoption have played a major role in the enhancement of public service delivery, they have also shown the need to upskill public-sector professionals and emphasize continuous improvement in their capacity as frontline actors in public service delivery.

In collaboration with the DAP, the APO Secretariat organized a face-to-face course on Development of Public-sector Productivity Specialists, 6–17 November in Manila, the Philippines, attended by 22 participants from 14 APO members. It was facilitated by three resource persons from Canada, the ROK, and the Philippines.

**Program coverage:** Role of the public sector in enhancing productivity; e-Government; Regulatory reform; Public-sector leadership; Citizen-centered services; Foresight; Change management; Measuring public-sector productivity; Tools and approaches in improving organizational productivity; and Performance management. Site visits to three public-sector organizations were also made.

### Training Course on Leadership in Public-sector Organizations

APO members continue to face challenges in providing productive public services under changing circumstances. Leaders who can respond to those changes and guide public-sector organizations to achieve higher productivity are therefore needed. They must understand the leadership capabilities required for enhancing service delivery and productivity performance in public-sector organizations and best practices of systematic approaches to high-performing public-sector leadership development.

An online training course on Leadership in Public-sector Organizations was held 29 May–1 June,



organized by the NPS and APO Secretariat. The course was attended by 43 participants from 11 APO members and facilitated by three resource persons from Canada, Spain, and Sri Lanka.

**Program coverage:** *Understanding the roles of leadership and its importance in public-sector organizations; APO Public-sector Productivity Program Framework; APO Framework for Public-sector Leadership; Leadership skills and capabilities for productivity enhancement; Efficient public service delivery; and Innovative, productive public-sector organizations.*

### Workshop on Future Skill Requirements in the Manufacturing Sector

The Fourth Industrial Revolution is transforming manufacturing with digital technologies, resulting in new processes, business models, and forms of work. It brings opportunities for talent familiar with advanced technologies but also challenges to the majority of the manufacturing workforce accustomed to conventional production and management methods. It is essential to cultivate individuals who can leverage digital technologies while supporting the existing workforce in upskilling and reskilling to harness the benefits of digital transformation.

To assist APO members in supporting the manufacturing workforce to respond to the challenges and opportunities brought by digitalization and other megatrends, the APO Secretariat collaborated with the NPC in organizing an online workshop on Future Skill Requirements in the Manufacturing Sector, 12–14 December. Thirty-three participants from 11 APO members completed the workshop, where seven resource persons from Canada, Germany, India, Malaysia, the Netherlands, and Singapore presented trends influencing global value chains and strategies to upskill the workforce in the manufacturing sector.

**Program coverage:** *The future of manufacturing: Trends and core technologies; Future landscapes and geographies of manufacturing and global value chains; Using frontier technologies for greening global value chains in latecomer economies; New work in the digital age: Designing work systems and developing competencies for future work; Workforce restructuring and supporting policies and initiatives; Journey to Manufacturing 5.0; The future of manufacturing; and Addressing manufacturing skill gaps: Strategies and policy programs from India.*

### Training Course on Smart Manufacturing Productivity Specialists

Considering the challenges faced by APO members in the digital transformation of SMEs, the APO Secretariat launched its first training session on Smart Manufacturing (SM) Productivity Specialists to equip productivity specialists with knowledge of SM so that they can serve as champions and disseminators within their member economies.

In collaboration with the CPC, the first training course on Smart Manufacturing Productivity Specialists was held in the face-to-face modality, 21–25 August, in Taipei. It was attended by 22 participants from 15 APO members. Three resource persons from the ROC, ROK, and Malaysia were assigned to facilitate the course. Site visits to two local companies in Taichung were conducted to strengthen participants' understanding of applications of SM technologies in real factories.

**Program coverage:** *Introduction to SM for SMEs; Key technologies and enablers in SM; The IoT for SMEs; Smart factory design for SMEs; Implementation of SM in SMEs; Big data and analytics for SMEs; Effective communication/training and coaching techniques/consulting skills; and Site visits.*

### Development of Productivity Specialists

The *APO Productivity Databook 2022* reported that the GDP growth of many APO members had declined due to decreases in total factor productivity. Therefore, the development of a pool of productivity specialists who can provide solutions to low productivity growth in various economic sectors is critical. The APO continues to organize the Development of Productivity Specialists (DPS) course,

which was designed to develop the capacity of NPO professionals and equip them with knowledge of the latest techniques and tools for improving productivity in organizations. Qualified productivity practitioners are expected to assist in national efforts for sustainable socioeconomic development.

In collaboration with the MPC, a Development of Productivity Specialists course was conducted in Kuala Lumpur, 6–17 November. The face-to-face training was attended by 26 participants from 17 APO members, including professional staff or associate consultants of NPOs, productivity practitioners, and executives involved in conducting productivity training, consultancy, research, or promotional activities. Five resource persons from the ROC, Japan, Malaysia, and Singapore facilitated the course.

**Program coverage:** *Malaysia Productivity Blueprint; Productivity Specialists Certification Body; Case presentation on productivity project experiences; Productivity tools and techniques (productivity diagnosis and improvement solutions); Development of productivity specialists as productivity consultants, trainers, and promoters; and Demonstrating competencies as productivity specialists. P&Q diagnosis sessions were hosted by Alumac Industries Sdn. Bhd., Institute Aminuddin Baki (IAB), Setsu Precision Technology (M) Sdn. Bhd., and Victorious Step Sdn. Bhd.*

### Workshop on the Aging Agricultural Labor Population

The ADB reported in 2020 that the aging of the farming population was a major concern in both developed and developing APO members. Addressing aging-related issues in the agricultural workforce is thus critical to achieve productive, sustainable agriculture. Governments are adopting various policies and schemes to aid aging farmers and to attract young people to agriculture. Efforts have also been made by local governments, communities, and the private sector. Addressing this issue requires a combination of efforts from both sectors aimed at attracting young people, utilizing technology and innovation, and improving working environments.

An online workshop on the Aging Agricultural Labor Population was implemented 10–12 May by the Council of Agriculture, Executive Yuan, ROC; CPC; and APO Secretariat. It examined government policies, schemes, and measures to deal with aging issues; shared best practices; and analyzed issues and challenges in APO members. Thirty participants from 11 APO members attended. Five resource persons from the ROC, Indonesia, Thailand, and the UK covered the aging issue from various aspects including demographic research and analysis, national policies, and case studies.

**Program coverage:** *Overview of the aging farmer debate and issues in the Asia-Pacific region; National policies on and approaches to the aging issue in agriculture in the ROC; Case studies of the ROC, Indonesia, and Thailand; and Key considerations in aging farmer issues.*

### Multicountry Observational Study Mission on Service Innovation

Due to the growing importance of the service sector in the Asia-Pacific region, innovation is crucial to provide customers with better, more efficient services. Adopting design thinking methodologies, which are holistic, intuitive, and customer-focused problem-solving approaches to optimize impact and value for shareholders, is one strategy to foster the culture of innovation. Another is to create national regulations that promote startup investment and open innovation. Business models that are more robust can be created by encouraging increased creativity and employee involvement.

In collaboration with the CPC, the APO Secretariat organized an online multicountry Observational Study Mission on Service Innovation, 12–13 July, which was attended by 44 participants from 12 member economies. It was facilitated by four resource persons, one from Japan and three from the ROC.

**Program coverage:** *Introducing service design thinking and innovation; Methods to encourage an innovation culture; and Public-private-sector relationships to nurture service innovation. Online site visits were hosted by the Taiwan Design Research Institute and iNSIGHT Center of National Taiwan University.*

### Workshop on Reskilling of the Workforce in the Service Sector

The introduction of automation and digitalization has significantly changed the customer experience and contactless operations in the service sector. This sector is already a significant driver of economic output, growth, and employment in many APO member economies, although there is still plenty of room for improvement. There are many opportunities for employees who are willing to learn new skills to remain relevant in the workforce. It is a valuable investment for companies to train existing employees to expand their capabilities.

In collaboration with the NPO, Pakistan, the APO Secretariat organized a workshop on Reskilling of the Workforce in the Service Sector, 16–18 May, attended by 22 participants from 13 member economies. It was facilitated by five resource persons, one from Malaysia, one from Singapore, one from the ROK, and two from Pakistan.

**Program coverage:** *Reskilling methods; Skills needed for future work; Next-generation technologies to enhance service productivity; and Case studies of reskilling initiatives.*

### Development of Public-sector Productivity Specialists

The APO continues to explore ways to enhance workforce efficiency, employee skills and motivation, and managerial abilities to make the most of public resources and meet citizens' needs in the new normal. These are the basics of the APO Public-sector Productivity Framework, which aims to strengthen public-sector capacity through enhancing the skills of employees.

An online training course on Development of Public-sector Productivity Specialists, 10–14 July, was organized by the DAP and APO Secretariat. The course was attended by 40 participants from 12 member economies and facilitated by four resource persons from Canada, the ROK, and the Philippines. The objectives included discussing the importance of productivity growth in the public sector, examining the roles of productivity specialists in supporting improvement initiatives in public-sector organizations, equipping participants with required skillsets and competencies as productivity specialists, and preliminary screening for the face-to-face course on a similar topic.

**Program coverage:** *Role of the public sector and global trends in improving productivity; Citizen-centered service and opportunities for improving public service delivery in the new normal; Performance management and public-sector leadership; Development of productivity improvement plans; Measuring public-sector productivity; Approaches for improving organizational productivity; and Competency assessment.*

### Development of Productivity Specialists

The APO Vision 2025 aspires to capitalize on prevailing trends, maximize emerging opportunities, and overcome challenges in the years ahead. The Development of Productivity Specialists course is a flagship program to enhance the capability of NPOs. It provides opportunities for NPO professionals to learn about and share know-how and best practices in productivity improvement techniques and methods as well as exchange knowledge and experience. This course is a prerequisite for participants to qualify for certification by APO-accredited CBs. Those who complete this course will be guided in completing the certification requirements, enabling them to submit applications to APO-accredited CBs in member countries.

The APO Secretariat in collaboration with the MPC organized an online training course on the Development of Productivity Specialists, 27–31 March. Forty-seven individuals from 15 APO member economies, including 15 from Malaysia, attended, representing professional staff of NPOs, academia, and public- and private-sector organizations. The sessions were conducted by three resource persons from Malaysia, the Philippines, and Singapore.

**Program coverage:** APO-PS 101:2019 Requirements for Productivity Specialists; Competency requirements of productivity specialists; Functional competency development of productivity specialists for domain expertise in understanding productivity and productivity tools and techniques; Functional competency development of productivity specialists as productivity trainers, promoters, and consultants; Insights on productivity and quality (P&Q) diagnosis; Planning and conducting P&Q diagnosis; Group presentations; Project preparation for the certification program; and Final exam.

### iii. Green Productivity

#### Workshop on the Green Tourism Certification Framework

The APO Vision 2025 of “Inclusive, Innovation-led Productivity Growth” includes the promotion and adoption of Green Productivity (GP) as a strategic thrust area for social development, economic prosperity, and environmental protection. Green tourism is a growing trend that aims to minimize the negative impacts of travel on the environment, society, and economy. Green tourism certification benefits businesses, consumers, governments, and local communities by addressing these issues and improving productivity in the sustainable tourism industry.

Hosted by the NTPC, Fiji National University, a face-to-face workshop on the Green Tourism Certification Framework was held 3–6 October in Nadi to learn about green tourism-related initiatives and best practices in APO members from case studies and country presentations. Twenty individuals from 10 APO members, including five from Fiji, attended the workshop. The sessions were facilitated by three resource persons from the ROC, Fiji, and ROK.

**Program coverage:** Introduction to green tourism; Overview of ecotourism; Inclusive, sustainable tourism; Fiji tourism case study; Green tourism certification: Challenges, opportunities, and benefits; Best practices of green tourism in Fiji; Best practices of green tourism in the ROC; Strategic planning and approaches to developing green tourism certification programs; and Green tourism certification requirements and implementation criteria. A site visit was hosted by Tifajek Hot Spring & Mud Pool.

#### Conference on Green Productivity and the Circular Economy

Meeting the UN SDGs in the short term and net-zero emission targets in the long term for a cleaner, greener future requires a paradigm shift. The circular economy (CE) and GP, a sustainability concept developed by the APO, provide a structured framework to mitigate the adverse environmental impacts of industrial activity with simultaneous improvement of productivity and resilience. To negate the adverse impacts and keep the increase in the average global temperature within 1.5°C, the 2022 Glasgow Climate Pact and 2015 Paris Agreement led to the UN SDGs and net-zero emission targets. Meeting the SDGs requires adoption of GP and CE tools and techniques by industry and end-users.

STAMEQ and the APO Secretariat held an online conference on Green Productivity and the Circular Economy, 26 September. It was attended by 52 participants from 15 APO members. Three resource persons from the ROC, Japan, and Vietnam gave presentations and addressed the questions of participants.

**Program coverage:** Mapping of GP in APO members; Implications of CE policy trends in the EU; and GP 2.0: The way forward.

#### Multicountry Observational Study Mission on Promoting Green Manufacturing

Green manufacturing (GM) reduces resource use and associated adverse environmental and social impacts, thus enhancing competitiveness and sustainability. This is aligned with the APO’s GP concept of environmental awareness, protection, and sustainability while promoting productivity. For APO members, GM applications employing various innovative strategies and techniques to become

more eco-efficient and raise productivity will help improve their environmental performance and achieve economic gains. GM adoption is thus a key step in achieving the ultimate goal of industrial sustainability in the region.

The APO and CPC organized a face-to-face multicountry observational study mission on Promoting Green Manufacturing, 3–5 October, attended by 35 participants from 15 member economies. It was facilitated by two resource persons from the ROC and Philippines.

**Program coverage:** *Global resource management and GM's role in the circular economy; Outlook for GP 2.0 in APO members for GM; GM strategies for SMEs; and Reflections on the best practices of GM in APO members. Site visits were made to six companies in the ROC.*

### Workshop on True Value and Cost Accounting in Organic Agriculture

True cost accounting (TCA) in agriculture assesses the benefits of production systems. It is often argued that organic agriculture yields are lower than those of conventional agriculture, but the advantages from the environmental, social, and economic viewpoints are ignored.

An online workshop on True Value and Cost Accounting in Organic Agriculture organized by the MPO and APO Secretariat was implemented 10–12 October, which was attended by 35 participants from 11 member economies. It was facilitated by three resource persons, one from Bangladesh, one from the USA, and one from Mongolia, who presented TCA methodologies, benefits, and examples in organic agriculture and showed how they can be compared with the performance of other production systems in APO members.

**Program coverage:** *Overview of the concept and current status of true value and cost accounting in organic agriculture; Cost-benefit analysis of organic farming; and Case studies of opportunities and challenges for TCA in organic agriculture.*

### Training Course on Green Productivity

Adopting productivity enhancement methods leads to profitability and business growth. The APO GP Framework is one pathway to decouple industrial growth from environmental degradation. Industrialization is a pathway toward economic development as it generates employment, increases exports, and raises standards of living. Emerging economies in the Asia-Pacific are undergoing industrialization but have yet to reap the benefits of economic prosperity. Enterprises thus need to adopt appropriate ways to grow sustainably. The APO developed the GP concept to ensure that gains in productivity, quality, and profitability also improve social well-being and environmental protection. To build a pool of accredited GP experts in member economies, the APO developed APO-GPS 201: Certification Scheme and Competency Standards for GP Specialists.

Hosted by STAMEQ, a face-to-face training course on Green Productivity was held 30 October–10 November in Da Nang, Vietnam. Twenty-five participants from 16 APO members successfully completed the two-week course, led by four resource persons, one from Malaysia, one from Singapore, and two from Vietnam.

**Program coverage:** *Cases from Vietnam highlighting GP initiatives; GP in the context of the circular economy; Trends impacting GP; GP concept and methodologies; Material flow cost accounting and management systems; and APO-GPS 201: Certification Scheme and Competency Standards for GP Specialists. An in-company visit to Quality Assurance and Testing Center 2 was made for diagnosis, and individual action plans were prepared.*

## Innovation for Productivity

### i. Robust Ecosystem and Regulatory Framework

#### Workshop on Organizational Innovation Management on Key Standards and Frameworks

The ADB (2022) reported that innovation had become a major factor in the Asia-Pacific region's productivity and inclusive economic growth efforts. However, R&D plays a greater role with more impact on technological advances in the region. The need for educated, capable workers is growing as public-sector innovation becomes more critical with the adoption of new technologies to meet citizens' demand for better services without spending more money and continuing emergence of new social challenges.

The APO Secretariat conducted an online workshop on Organizational Innovation Management on Key Standards and Frameworks, 20-22 February, to help participants better understand current developments in innovation management and assess their impacts, especially on productivity performance, using examples of best practices from the public sector. This included the ISO 56002:2019 Innovation Management System as a guide providing a framework for all organizations seeking to strengthen their innovation capabilities. Thirty-nine participants from nine member economies attended the workshop facilitated by four resource persons, two from I.R. Iran, one from Malaysia, and one from Sweden.

**Program coverage:** Definition of innovation management systems and frameworks; Innovation management systems applied in the public sector; Between the development and applications of ISO 56002:2019; Linking innovation management systems with the performance and productivity of public-sector organizations; Tools, methods, and frameworks for public-sector innovation; and Strategies and policy programs for encouraging innovation in public sectors.

#### Training Course on Applications of Behavioral Insights in Regulatory Management

Behavioral insights (BIs) in regulatory management are essential to design effective regulations, improve compliance rates, engage stakeholders, and evaluate interventions. Organizations can improve regulatory effectiveness and results and encourage evidence-based policymaking by incorporating BIs into regulatory management. Promoting behavioral change is a central goal of regulation, as demonstrated during the pandemic when governments used regulatory approaches to impose measures to contain and mitigate COVID-19 transmission. Recognizing the potential of BIs to enhance regulatory effectiveness, organizations worldwide have started integrating behavioral approaches into their regulatory frameworks and applying BIs to improve compliance rates, reduce regulatory burdens, and achieve better outcomes.

The MPC and APO Secretariat organized a face-to-face training course on Applications of Behavioral Insights in Regulatory Management, 11-15 September, in Kuala Lumpur, which was attended by 27 participants from nine APO members. It was facilitated by four resource persons, two from Malaysia, one from the ROK, and one from Singapore.

**Program coverage:** BIs in the public sector; BIs in policymaking and regulatory practices; BIs in communication and stakeholders' engagement; Communication plan for application of BIs; Ethical considerations in applying BIs; Harnessing BIs for effective regulatory management; Future trends and challenges in BIs; and Case study from Malaysia.

#### Workshop on Innovative Public Procurement

Innovative public procurement refers to acquiring new or significantly improved goods or services



to enhance the productivity and quality of public services. There is now a consensus that public procurement must be open to competition and operate at the highest level of integrity. Stakeholders view public procurement as a strategic government function and a public-sector management tool with direct impacts on the quality and quantity of services provided to citizens.

Hosted by the NPS, the APO Secretariat organized an online workshop on Innovative Public Procurement, 18–20 July, which was attended by 35 participants from 10 member economies. It was facilitated by three resource persons from the ROK, Sri Lanka, and Sweden.

**Program coverage:** *New approaches to public procurement; Public policy instruments for innovative procurement; Opportunities and challenges in innovative public procurement; Reforming public procurement systems for innovation; and Cases of successful innovative public procurement.*

### Training Course on Design and Evaluation of Innovation Policies

Innovation is viewed as a potential solution to economic and social concerns, and good policy is required to support it. An enabling innovation ecosystem supports governments in evidence-based decision-making and fosters collaboration among stakeholders. Nonetheless, designing innovation policies and evaluating their impacts require specialized knowledge and skills.

To assist APO members in strengthening their capabilities in devising, executing, and evaluating innovation policies, the APO Secretariat collaborated with the DAP to hold a training course on Design and Evaluation of Innovation Policies, 23–27 October, sharing methods and good practices for policy design and implementation. Twenty-five participants from 15 APO members attended, and four resource persons from Germany, the Philippines, and Thailand led discussions and exercises on tools and methodologies for innovation policy formulation and implementation.

**Program coverage:** *Advancing innovation: Innovation-led productivity enhancement; Fostering innovation: An ecosystem approach; Mobilizing stakeholders in the innovation ecosystem: The role of government agencies and the private sector; Innovation policy development and implementation: Success factors; Case presentation: National Innovation Council; Monitoring and evaluation of innovation policies: Framework and metrics; Designing innovation policy; and Case studies: Innovation policy evaluation examples from the Philippines. Site visits were made to the Center for Strategic Futures and Philifntech Innovation Office.*

### Workshop on Innovation Ecosystems and Social Entrepreneurship

The APO Vision 2025 and its goals aim for more inclusive, innovation-led productivity growth through business dynamism and innovation ability. More social entrepreneurs are realizing the importance of developing fresh ideas and solutions to complex issues such as social and environmental problems. Collective, collaborative efforts are required to resolve them.

In collaboration with the KPC, the APO Secretariat organized an online workshop on Innovation Ecosystems and Social Entrepreneurship, 27–29 March, which was attended by 28 participants from 11 members and facilitated by four resource persons, one from Malaysia, one from New Zealand, and two from the ROK.

**Program coverage:** *Definition of innovation ecosystems and social entrepreneurship; Innovation ecosystems and social entrepreneurship; Designing sustainable social businesses; Starting, managing, and scaling up innovative businesses; Financing social entrepreneurship; and Strategies and policy programs for encouraging innovation in social entrepreneurship.*

### Training Course on Cybersecurity Management Systems

Cybersecurity and productivity are key aspects of any organization, regardless of industry. Cyber-

attacks cause financial loss, legal or regulatory violations, and reputation damage that have negative impacts on productivity. However, while protecting information assets, it is equally important that cybersecurity measures do not stress staff, which could decrease productivity. Forty-three percent of cyberattacks target small organizations, while 47% of small enterprises are not prepared. During the COVID-19 pandemic, increasing shifts to remote and roaming work made businesses of all sizes more vulnerable to threats and attacks. Effective cybersecurity management systems can help create and maintain effective risk management strategies by understanding organizational vulnerabilities, monitoring and analyzing potential threats, and implementing appropriate safeguards.

The KPC and APO Secretariat conducted an online training course on Cybersecurity Management Systems, 16–19 May. Forty-one participants from 12 APO members completed the course led by five resource persons, two from the ROK, two from Singapore, and one from the USA. Common gaps in cyberprotection fundamentals were identified, followed by the top 50 cybersecurity threats and countermeasures.

**Program coverage:** *Cybersecurity overview: Global landscape, market segments, and common cybersecurity gaps; Top threats, countermeasures, and industry-specific cybersecurity tools; Cybersecurity risk management, security, and productivity performance; Issues and challenges in cybersecurity management; and Creating effective cybersecurity policies at organizational level.*

## ii. Innovation Capability

### Special Program for Capacity Building of Sustainable Food Value Chains for Enhanced Food Safety and Quality in Gampaha District

Enhancing food value chains (FVCs) is a crucial global strategy to achieve food security by ensuring food safety, quality, and innovation (FSQI). In advanced FVCs, strategic partnerships are developed among interdependent businesses that collaborate in a sequence of value-adding stages, resulting in a collective competitive advantage. FVCs enable different enterprises to work together to produce and market products and services effectively and efficiently. They also allow agrifood businesses to respond to the marketplace by linking production, processing, transportation, storage, and marketing activities to consumer demand.

To assist SMEs in food-related activities in the Gampaha district of Sri Lanka in developing FSQI frameworks to modernize FVCs and establish demonstration SMEs to showcase modern FSQI processes and results of improvements in a tangible, practical manner, the APO along with the NPS organized an online consultancy and training course for SMEs on Capacity Building of Sustainable Food Value Chains for one day in January and two days each in late April, mid-July, and early August. Ten SMEs in the Gampaha district participated, with 150 employees attending the dissemination conference along with one resource person from Japan, two from Thailand, and one from Turkiye who shared knowledge and experiences on FSQI to modernize FVCs.

**Program coverage:** *Advanced food safety management and technology; and Improving food manufacturing, processing, and distribution systems.*

### National Conference on Capacity Building of Sustainable Food Value Chains for Enhanced Food Safety and Quality in Vietnam

Sustainable food systems provide healthy food and nutritional security while limiting negative environmental impacts and improving socioeconomic welfare. They are therefore protective and respectful of biodiversity and ecosystems as well as human well-being and social equity. FSQI contribute directly to overall food system transformation to meet the SDGs.

To introduce and promote modern FSQI methods in FVCs; share their impact on delivering affordable, nutritionally adequate, safe, healthy food; and enhance the productivity and competitiveness

of the agrifood sector in Vietnam, the APO and STAMEQ organized an online conference on Capacity Building of Sustainable Food Value Chains, 31 March and 9 May. One hundred participants in Vietnam attended the conference, and six resource persons, one each from Thailand and Turkiye and four from Vietnam, shared knowledge and experience of FSQI to modernize FVCs.

**Program coverage:** *Advanced food safety management and technology; and High-end technology for food manufacturing, processing, and distribution systems.*

### Workshop on Public Service Innovation in the New Normal

Governments around the world are placing increasing priority on innovation. The interaction of social, political, environmental, and technological factors makes it impossible to maintain unchanged norms, and the public sector's capacity for innovation is important in overall socioeconomic innovation. For public-sector organizations, innovation means modernizing processes and enhancing the quality of life for citizens. Creative strategies are needed in the public sector as a result of raised expectations, new challenges brought on by complicated problems, and financial constraints.

An online workshop on Public Service Innovation in the New Normal was implemented 14–16 August by the Ministry of Manpower of the Republic of Indonesia and APO Secretariat. Thirty-five participants from 14 APO members attended. Four resource persons from Indonesia, the Philippines, and UK covered the current landscape of innovation in public service, case studies from Indonesia, and approaches to embed innovations in public services such as design thinking and citizens' participatory approaches. Group discussions analyzed issues faced and potential solutions in APO members.

**Program coverage:** *Understanding innovation and its challenges and opportunities; Applying innovation in the public sector; Procedures and regulations to support public service innovation; Designing approaches for public service innovation, including procurement and partnerships; Engaging citizens in public service culture, design, and planning; Best practices of public service innovation; and Tools to manage risk in innovation.*

### Workshop on Digital Government for Inclusive Public Service Delivery

The adoption of digital technologies in governance and fostering inclusive public service delivery are critical in the postpandemic era. The need for continuity of services, efficiency and speed, cost reduction, and inclusivity accelerated digital transformation. Government agencies face challenges in meeting citizens' high expectations of digital service delivery to all, even in remote areas of developing countries. As most governments aim to modernize operations and processes through digitalization, they must consider how to offer services that are both accessible to citizens and conducive for businesses.

An online workshop on Digital Government for Inclusive Public Service Delivery was implemented 4–6 October by the NPCC and APO Secretariat. Thirty-four participants from 11 APO members attended. Six resource persons, one each from Cambodia, the ROC, Japan, and Singapore, and three from the ROK, delivered presentations and facilitated the workshop, three of whom were working with the APO Secretariat for the first time.

**Program coverage:** *Overview of digital transformation in the public sector; Inclusive digitalization of public service delivery; Public-private partnerships for enhancing digital public service delivery; and Case studies from Estonia, Singapore, and elsewhere.*

### Workshop on Agricultural Innovations for Climate Resilience

Agricultural productivity has been affected by climate change, which has caused droughts, heat waves, salinity, and flooding. A report from Stanford University (2021) revealed that global farming productivity was 21% lower than it could have been without climate change, indicating that climate change had wiped out about seven years of improvement in agricultural productivity over the past 60 years.

An online workshop on Agricultural Innovations for Climate Resilience was implemented 12–14 September by the JPC and APO Secretariat. Thirty-five participants from 12 APO members attended. Four resource persons, two from India, one from Japan, and one from Vietnam, discussed the current and future impacts of climate change on agriculture and gave presentations on strategies, models, and case studies focusing on adaptation activities. Participants examined key success factors from the case studies and engaged in group discussions to analyze issues faced and potential solutions in APO members.

**Program coverage:** *Overview of global climate change impacts on agricultural production; Innovative tools, techniques, and models to increase crop yields under different environmental threats; and Policies and regulations to accelerate the adoption of climate-smart agriculture.*

### Multicountry Observational Study Mission on the Cashless Society

A cashless society helps reduce business risks and costs, increases transaction speed, and facilitates the collection of economic information and digital connection. It also creates concerns over users' privacy, marginalization of those without digital technology access, and concentrated control of information. As APO members promote digital upgrading and the development of a cashless society, a review of how to maximize the benefits and reduce negative socioeconomic impacts is necessary. The APO Sustainable Productivity Summit in 2018 explored cashless society concepts and adoption in the Asia-Pacific region.

To support APO members in their digital transformation of economic activities, the APO Secretariat collaborated with the NPS in organizing an online observational study mission on the Cashless Society, 12–13 September, to discuss the costs and benefits of a cashless society and strategies and policies for a well-functioning one. Twenty participants from eight APO members attended the study mission, in which three resource persons from Australia, Sri Lanka, and Sweden showcased cashless applications, supplementary policies, and socioeconomic implications to strengthen participants' understanding of a cashless society and how it could contribute to digital transformation.

**Program coverage:** *Cashless society: Processes, benefits, and challenges; Digital transactions and platform economies in Asia; Strategies and policies for a healthy cashless society; and Good practices in the Asia-Pacific region and experience in Sri Lanka.*

### Workshop on Blockchain Technologies for Business Innovation and Productivity

The adoption of technologies is paramount for enterprises striving to gain a competitive advantage. Blockchain technologies have far-reaching applications across many industries due to key features such as elimination of intermediaries, data security, and transparency. Blockchain technologies enable globalization, streamline business operations across value chains, and reduce overall operation costs. Adoption of blockchain technologies by the financial and banking sector shows that they are mature enough to be adopted by industry. As their use is in the nascent stage, blockchain technologies offer a range of opportunities for businesses to innovate and enhance productivity for overall growth and profitability.

The APO Secretariat held an online multicountry workshop on Blockchain Technologies for Business Innovation and Productivity, 20–22 November. Thirty-five participants from 13 APO members registered for this workshop. Four resource persons, one each from India and the USA and two from I.R. Iran delivered presentations pertaining to blockchain technologies, best practices, and industry case studies.

**Program coverage:** *Defining blockchain technologies; Industry cases; Establishing blockchain practices at an enterprise level; Addressing technological risks; Reducing environmental impacts through blockchains; Blockchain-based governance; and Cost transformation with blockchain technologies.*

### Conference on Building an Ecosystem for Innovative Entrepreneurship

Innovation is a major determinant of long-term economic growth and productivity improvement. Innovation driven by entrepreneurs and startups is closer to market demand and customer needs and thus crucial for technological and economic development. The benefits of innovation and entrepreneurship are often accompanied by uncertainty and risks, requiring a supportive environment with collaborative stakeholders. Developing an enabling ecosystem to mobilize resources is thus essential for encouraging entrepreneurship and innovation.

To assist APO members in comparing and devising strategies for developing an enabling ecosystem for entrepreneurs, the APO Secretariat collaborated with STAMEQ in organizing an online conference on Building an Ecosystem for Innovative Entrepreneurship, 17 May, to identify trends and good practices of startup ecosystems in the Asia-Pacific region. Forty-eight participants from 12 APO members attended the conference, where four resource persons from the ADB, ROC, and Vietnam presented initiatives supporting startups and effective ways to connect stakeholders in the ecosystem.

**Program coverage:** *Ecosystems for startups in Asia and the Pacific; Building entrepreneurial capacity: Resources and goals of incubators and accelerators; Innovation, value identification, and value realization; and Creating a conducive ecosystem for innovation: Examples from Vietnam.*

### Training Course on Knowledge Transfer to Improve Agricultural Productivity

Transferring new knowledge and technologies to farmers is a critical factor in continuously improving productivity by increasing yields and improving the quality of outputs. The Agricultural Knowledge and Information System (AKIS) supports the sharing of knowledge among relevant stakeholders. While technologies and methodologies have evolved, not all farmers in APO members are equipped to adopt and utilize them.

A face-to-face training course on Knowledge Transfer to Improve Agricultural Productivity was implemented 28 August–1 September in Dhaka, hosted by the NPO, Bangladesh. Twenty-three participants from 13 APO members attended. Three resource persons from Bangladesh, India, and Japan covered aspects of knowledge transfer including overview, methodologies, tools, case studies, and digitalization.

**Program coverage:** *Overview of knowledge transfer to improve agricultural productivity frameworks, tools, approaches, and benefits; and Case studies of knowledge transfer activities in Bangladesh, India, and Japan. Site visits were made to the Agricultural Extension Department in Dhaka and its Extension Center in Shavar.*

### Workshop on Food Innovation

Innovations in food are necessary to feed growing populations and provide nutritious, safe food for all. Progress in processing technology, biotechnology, and nutritional science is driving food innovation. Developing countries, however, face difficulties in achieving innovation-based transformation due to a lack of information and other resources.

An online workshop on Food Innovation organized by the FTPI and APO Secretariat was implemented 25–27 July, which was attended by 44 participants from 13 member economies. It was facilitated by six resource persons, one from Cambodia, one from Hong Kong, one from Japan, one from Singapore, and two from Thailand.

**Program coverage:** *Overview of current innovations and future trends; Long-term productive, sustainable food systems; and Case studies of opportunities and challenges for food innovations.*

### Workshop on Green Innovation

Innovation is essential in transitioning to greener industry and achieving national targets and goals for a net-zero carbon future. Industry can no longer rely on conventional ways of producing and consuming products which have adversely impacted the environment. Greening business ecosystems would result in the development of low-carbon technologies and nature-based products that may have low/long payback periods but would not impact the environment negatively. Public policy institutions act as catalysts for the adoption of innovations by creating conducive business environments through financial support for research, tax benefits, mandatory reporting, etc. To mainstream innovations, effectively designed policies provide impetus while addressing implementation challenges for overall socioeconomic development.

The DAP and APO Secretariat held a workshop on Green Innovation in the online modality, 4–6 October. It was attended by 23 participants from eight APO member economies. Three resource persons from Australia, the Philippines, and UAE delivered presentations on key elements fostering innovation and green growth.

**Program coverage:** *Interconnections between productivity and innovation; Leadership capacity-building and training programs using an experiential learning model; Policy interventions for boosting energy productivity; Strategies for skilling for green jobs; Climate finance and the public sector; Engaging stakeholders and building alliances; Building green business ecosystems through incentives and regulations; and Developing public-private partnerships for wider adoption of clean technology and enterprise growth.*

## Inclusive Productivity

### i. SME Development

#### Multicountry Observational Study Mission on Best Practices in Lean and Digital Transformation for SMEs

Lean is a methodology that focuses on reducing waste and increasing efficiency in organizational processes based on the concept that continuous improvement requires all processes that do not add value to be eliminated. This method can be applied in any sector. However, digital transformation (DX) maximizes technology use to improve organizational operations, enhance customer experience, and create new business models. The recent pandemic, advances in technology, and scarcity of labor accelerated digital adoption in many APO members. However, to ensure that companies, particularly SMEs, are able to transform in the most resource-efficient way, strengthening processes through lean management is crucial.

In collaboration with the Department for Productivity Implementations, Ministry of Industry and Technology, Turkiye, and Konya Model Factory Complex, the APO conducted a multicountry observational study mission on Best Practices in Lean and Digital Transformation for SMEs, 19–23 June, in Konya, Turkiye. The main objectives were to observe lean management practices in Turkish SMEs and how digital upgrading was initiated. Twenty-seven participants from 17 APO members attended this face-to-face project to gain insights on lean and DX applications. Four resource persons, one each from Malaysia and Singapore and two from Turkiye, led the mission.

**Program coverage:** *Lean management and practices in SMEs; Lean management as the foundation for DX in SMEs; Model factory methodology and best practices; Experiential learning on activity sam-*



pling and waste walks; DX use cases on model factory shopfloors; Integration of lean management and DX; and Analyzing SME readiness for DX and preparing future talent. Site visits were hosted by Caglayan Refrigeration Company, Onallar Agricultural Machinery Ltd., and Akinrobotics.

### Training Course on Digital Manufacturing for SMEs

Digital transformation can reduce SMEs' transaction costs, provide quicker access to information, and improve communications among staff, suppliers, and networks, helping them integrate into global markets and enhancing their scope of trade. A 2020 study conducted by the APO Center of Excellence on Smart Manufacturing found that SMEs in most APO members faced challenges in transitioning to Industry 4.0 systems and are struggling to define the starting point to transform processes from analogue to digital. SMEs lack management support and know-how while facing market uncertainty, process complexity and incompatibility, and financial constraints.

In collaboration with the JPC, a training course on Digital Manufacturing for SMEs was conducted in Japan, 13–17 November. It explained the steps, approaches, and methods to guide SMEs in digital transformation and applying the right digital tools in their processes. The course was attended by 18 participants from 10 APO members, facilitated by three resource persons, one from the ROC and two from Japan.

**Program coverage:** Overview of digital manufacturing; IoT basics; Digital systems and kaizen; Data acquisition and storage through sensors, visualization, analysis, and system construction; and Project management.

### Training Course on Productivity Measurement for Digitalized SMEs

SMEs are important contributors to economic expansion worldwide. The pandemic emphasized the significance of flexibility, adaptability, and ongoing learning for SMEs to quickly embrace new technology, respond to changing conditions, and monitor productivity in real time to remain competitive. Additionally, it widened the gap between SMEs that had access to digital technologies and those that did not. Accurately measuring productivity is more challenging when working remotely or under flexible conditions because traditional metrics like hours worked are less useful.

Hosted by the KPC, the APO Secretariat organized an online training course on Productivity Measurement for Digitalized SMEs, 1–4 August, which was attended by 31 participants from 15 members. It was facilitated by two resource persons from the ROK and Singapore.

**Program coverage:** Understanding key productivity measurement methodologies, tools, and techniques; Measuring productivity in the digital workplace; Enhancing data analysis and management through digitalization; and Challenges and best practices in productivity measurement in digitalized SMEs.

### Workshop on Food Supply Chains in the Informal Sector

Food supply chains in the informal sector play an important role in complementing formal-sector supply chains. The COVID-19 pandemic worsened food insecurity, especially in the producer-driven informal sector, compounding food insecurity issues worldwide and increasing health risks.

An online workshop on Food Supply Chains in the Informal Sector organized by the NPO Bangladesh and APO Secretariat was implemented 5–7 December, attended by 48 participants from 15 member economies. It was facilitated by three resource persons from Bangladesh, Indonesia, and Singapore.

**Program coverage:** Overview of food supply chains in the informal sector; Definition of informal food supply chains; Safety and quality control of food in the informal sector, and Case studies of informal food supply chains in APO members.

### Multicountry Observational Study Mission on Millennial Leaders to Drive Rural Development

The productivity of rural businesses and society must be enhanced to attract and retain young people. Millennial leaders have the potential to lead this change with their digital literacy and adaptable, collaborative mindsets. Some members provide incentives to attract youth to agriculture and rural businesses. Indonesia has operated Farmers' Agricultural Rural Training Centers for many years to develop young rural community leaders. Millennials have successfully applied new lifestyle values and IT literacy to rural development initiatives, which can serve as models for similar efforts in other APO members.

A face-to-face multicountry observational study mission on Millennial Leaders to Drive Rural Development was conducted 11–13 July in Bali, Indonesia, which was attended by 44 participants from 15 member economies. It was hosted by the Ministry of Agriculture and Ministry of Manpower, Republic of Indonesia. Two local resource persons gave insights on youth-engagement initiatives in Indonesia and led four site visits demonstrating how young people drive rural community development with their passion, digital capacity, business mindset, and new value propositions.

**Program coverage:** *Overview of rural development policies; Review of critical success factors in attracting youth to agriculture; and Strategies adopted in APO members to involve millennial leaders in agricultural productivity initiatives. Site visits were made to model rural development communities.*

### Conference on Tourism 4.0 for Rural Development

Tourism 4.0 is a new paradigm combining digital advances with the principles of sustainability. To assist rural economies and communities to recover, regrow, and become more sustainable and inclusive, Tourism 4.0 delivers information on destinations using technologies to enhance tourism operations and sustainability. This includes using smart systems to optimize energy consumption, waste management, and water usage in tourist facilities as well as big data analytics to improve tourism planning, management, and decision-making.

A face-to-face conference on Tourism 4.0 for Rural Development was implemented 8–9 November by the Ministry of Village, Development of Disadvantaged Region, and Transmigration, Ministry of Manpower of the Republic of Indonesia, and APO Secretariat in Jakarta, Indonesia. Seventy participants involved in tourism and rural development from 16 APO member economies attended. Six resource persons, one each from Malaysia, Thailand, Saudi Arabia, and Slovenia, and three from Indonesia, gave views on tourism and digital opportunities from various perspectives.

**Program coverage:** *Overview of Tourism 4.0; Implementation of smart rural tourism; Tools, techniques, and approaches for Tourism 4.0; Linkage to UN SDGs; Case studies; and Panel discussion on Tourism 4.0 in APO members to support sustainable rural development.*

### Training Course on Service Quality Management in the Retail Industry

Following COVID-19, there are still difficulties for the retail industry, such as decreased demand because of economic unpredictability, persistent health and safety worries, and the necessity for digital technology investment to stay competitive. Customer satisfaction and experience (CX) are essential to the retail sector's performance, and service excellence is important for retaining clients and boosting revenue. Retailers must adjust to shifting consumer preferences for e-commerce and online purchasing. All member economies could profit from learning how to enhance service quality, particularly new customer connections, to increase income.

In collaboration with the CPC, the APO Secretariat organized a face-to-face training course on Service Quality Management in the Retail Industry, 4–8 September, in Taipei, the ROC, which was attended by 23 participants from 15 member economies. It was facilitated by three resource persons from the ROC, Japan, and Malaysia.

**Program coverage:** Concepts of customer service; Customer relationship management; e-Commerce and introduction of technologies to the service sector; International marketing strategies; and Customer satisfaction and loyalty. Site visits were hosted by Grape King Bio Ltd. and Carrefour Neihu Store.

### Workshop on the Future of the Creative Economy

Creative industries, encompassing arts, music, design, fashion, advertising, and gaming, are key for economic growth, fostering economic diversification, capitalizing on cultural heritage, synergizing with tourism, and empowering SMEs and the youth. These creative industries face uneven success among APO members. While some have thrived in certain sectors, many struggle to fully harness their potential due to a lack of understanding, insufficient policies, an absence of intermediaries, and inadequate financial support, despite possessing rich cultural and heritage assets.

An online workshop on the Future of the Creative Economy was implemented 22–24 November by the Ministry of Manpower of the Republic of Indonesia and APO Secretariat. Thirty-six participants from 14 APO members attended. Seven resource persons, one each from Canada, France, India, the Netherlands, and Switzerland, and two from Indonesia, delivered presentations and facilitated the workshop, all of whom were working with the APO Secretariat for the first time.

**Program coverage:** Overview of the creative economy; Digitization modeling toward creative economy development; Policy initiatives to enhance the digital economy and creative products; Advertising as a creative industry; and Case studies from India, Japan, and the ROK.

### Training Course on Total Productive Maintenance for SMEs

Total productive maintenance (TPM) is a powerful management technique that can empower SMEs as it focuses on comprehensive, continuous optimization of production and maintenance with the direct participation of the entire workforce. It is timely to revisit this method and explore its possible integration into current digital transformation initiatives.

A face-to-face training course on Total Productive Maintenance for Small and Medium Enterprises was implemented 30 October–3 November by the NPO, Bangladesh. Twenty-one participants from 11 APO members attended. Two resource persons from Japan and Malaysia led the sessions and facilitated the workshop.

**Program coverage:** TPM with 8 pillars; Overall equipment effectiveness (OEE); Kaizen and TPM; Important points in implementation of TPM pillars; and TPM in the era of Industry 4.0.

### Training Course on Smart Transformation for Agribusinesses

Agribusinesses face challenges such as competition and increasing costs. Smart technologies contribute to efficient food processing, maintaining quality, and reducing food waste by ensuring quality maintenance and production in the right quantities to meet consumer demand. The biggest challenges for agribusinesses in adopting smart technology are capacity and financial support.

In collaboration with the DAP, a face-to-face training course on Smart Transformation for Agribusinesses was held 8–12 May in Manila, the Philippines. Twenty-two participants from 12 APO members attended. Three resource persons from the Philippines, Singapore, and Thailand gave presentations on smart technology including overviews, methodologies, tools, case studies, and digitalization.

**Program coverage:** Overview of smart agricultural transformation frameworks, tools, approaches, and benefits; Case studies on agricultural production and agribusiness enterprises; DAP activities related to agricultural transformation; and Greenhouse management with automatic environmental control and irrigation. Site visits were hosted by DMI Medical Supply Co. Inc., the DAP Conference Center in Tagaytay City, and Turbulent Demo Farm.

### Special Account for Business Recovery and Resilience

The Special Account for Business Recovery and Resilience is an initiative by the APO to assist member economies in dealing with the COVID-19 pandemic. There are three programs offered to APO members: 1) Strengthening Digital Capability of NPOs; 2) Assistance to SMEs and Critical Sectors; and 3) Enhanced In-country Services.

All APO members completed activities under Strengthening Digital Capability of NPOs by the end of 2022, while four implemented activities under programs 2) and 3) in 2023. The APO provided a budget of USD130,000 per country to fund those two programs. The activities in those four countries are expected to be completed in the first quarter of 2024.

## ii. Broad-based Engagement

### Training Course on Work Design for Inclusive Productivity

Achieving inclusive productivity is vital for the growth and development of organizations. Inclusive work design practices play a critical role in achieving this by accommodating the needs of diverse employees. According to a 2022 ILO report, diversity, equity, and inclusion have become increasingly important topics in the workplace. Organizations are recognizing the benefits of a diverse workforce and trying to create inclusive cultures that promote productivity and employee engagement. As remote and hybrid work arrangements have become more prevalent, it is even more important to design work processes that consider the needs of diverse employees.

The NPC, India, and APO Secretariat organized an online training course on Work Design and Inclusive Productivity, 19–22 September, attended by 28 participants from nine member economies. It was facilitated by three resource persons from India, Japan, and the Netherlands.

**Program coverage:** *Introduction to work design and inclusive productivity; Principles of inclusive work design; Benefits of inclusive work design for productivity and employee well-being; Tools and techniques for designing new types of work arrangements; Promoting a culture of inclusion and diversity in the workplace; and Strategies for inclusive work design.*

### Conference on Enhancing Employability of Workers in the Informal Economy

The informal sector, a significant source of employment in APO member economies, presents challenges such as low wages and job insecurity. Addressing the vulnerabilities of informal workers, who constitute over 61% of the Asia-Pacific region's workforce, is crucial. Despite contributing to economic value, they lack social support and protection. Enhancing employability in the formal economy necessitates a comprehensive strategy, including individual-level interventions like skill development and vocational training. Government-level actions, such as skill development schemes and incentives for companies employing informal workers, are vital.

The APO organized an online conference on Enhancing Employability of Workers in the Informal Economy on 7 December, attended by 27 participants from 11 members. It was facilitated by four resource persons from India, the Philippines, Thailand, and the UK. The conference was organized by the NPC, India, and APO Secretariat.

**Program coverage:** *Informal employment implications for economic growth; Employability in productive economic activities; Skill development for informal workers; Inclusive labor laws and social protection measures; and Informal labor and productivity growth.*

### Workshop on Supporting Youth in Entrepreneurship

Innovation and entrepreneurship are major drivers of enhanced productivity, and the creativity and ideas of the youth are sources of inspiration. The Asia-Pacific region currently hosts the largest generation of youth in history, according to the UNDP. However, the capabilities of young people are not always incorporated in economic activities or reflected in innovation systems. It is crucial to provide the youth with enabling systems to unleash their potential. Nurturing entrepreneurs and young professionals requires significant resources, such as funding and financing, training, and networking opportunities.

To assist APO members in developing strategies to support youth entrepreneurship, the APO Secretariat collaborated with the KPC to conduct a workshop on Supporting Youth in Entrepreneurship, 7–10 November in Seoul, to share good practices and identify key features of successful youth entrepreneurship policies and programs. Nineteen participants from 16 APO members attended the workshop, where three resource persons from Japan, the ROK, and UNDP led discussions related to the youth, startups, and entrepreneurship and guided participants in identifying strategies and action plans for their national contexts.

**Program coverage:** *Innovation, entrepreneurship, and the youth; An ecosystem approach to innovation and youth entrepreneurship; Youth entrepreneurship landscape in the Asia-Pacific; Enhancing access to resources for youth entrepreneurship; Skill development and training for youth entrepreneurs; and Nurturing youth entrepreneurship: Case studies from the ROK. Site visits were made to the Global Startup Festival COMEUP and Gyeonggi Center for Creative Economy and Innovation.*

### Workshop on Productivity Enhancement for Women Entrepreneurs

Women in developing economies tend to lack opportunities for training, preventing them from growing productive businesses. A significant gender gap in the scale and nature of entrepreneurship remains, which was underlined during the COVID-19 pandemic. Mitigating negative conditions, narrowing the gender gap, and eliminating factors that hold back women entrepreneurs are crucial. Appropriate policy interventions should be in place to assist women entrepreneurs in enhancing their productivity and business sustainability. Financial, market access, and skill development support schemes to address challenges and aid women entrepreneurs in developing successful businesses are important.

A face-to-face workshop on Productivity Enhancement for Women Entrepreneurs was held 14–18 August in Singapore, hosted by the SGPC. The workshop discussed challenges hindering women's entrepreneurship, effective policies and schemes to support women entrepreneurs, and the impact of the COVID-19 pandemic on the productivity of businesses owned by women. Nineteen participants from 14 member economies attended the workshop. Three resource speakers from India, the Philippines, and Singapore shared insights on the topics.

**Program coverage:** *The gender gap in entrepreneurship and productivity; Impact of COVID-19 on women entrepreneurs' productivity; Policies to foster a conducive entrepreneurship environment; Enhancing access to finance for women entrepreneurs; Schemes to develop women's entrepreneurship skills; Relevant business models for women entrepreneurs; and Networks and role models for women entrepreneurs. Site visits were hosted by Anna's Sourdough Café and Punggol, local businesses owned by women entrepreneurs.*

### Development of Productivity Practitioners among the Youth

The Development of Productivity Practitioners is an APO flagship program to produce cadres of productivity experts in member economies. It provides knowledge and skills to develop productivity consultants and trainers, focusing on individuals already working in industry or professionals from NPOs. Providing opportunities to the youth or young professionals to embrace and spread the

productivity culture will help NPOs in promoting national movements, as talented young people are expected to lead their organizations in the future.

To enhance awareness of the importance of productivity among young people, an online training course on Development of Productivity Practitioners among the Youth was conducted 30 May–2 June in collaboration with the NPCC. A total of 32 participants from 10 member economies attended, and five resource persons, two from Cambodia, one from Malaysia, one from the Philippines, and one from Singapore facilitated the course.

**Program coverage:** *Role of youth in national development; Understanding productivity; Total quality management; Digitalization and productivity; Principles and applications of basic productivity enhancement tools and techniques; Best practices through sharing of experiences; Impact of AI on productivity; and Issues and challenges in implementing productivity activities for youth.*

### Workshop on Policies for Engaging Persons with Disabilities in Agriculture

Most persons with disabilities (PWDs) live in rural areas, and many are small farmers depending on agriculture for their livelihoods. They face barriers in becoming economically self-reliant and are often ignored in mainstream policies. It is essential to empower farmers with disabilities, including women, and make them economically self-reliant by developing the skills to become independent, small-scale entrepreneurs.

An online workshop on Policies for Engaging Persons with Disabilities in Agriculture was held 3–5 October, organized by the APO Secretariat. It was attended by 16 participants from nine member economies and facilitated by three resource persons from Lao PDR, the Philippines, and UK.

**Program coverage:** *Introduction to the rights of PWDs; Barrier analysis: Introduction to approaches in disability-inclusive programming; Best practices of successful, inclusive agricultural programs with PWD inclusion; and Applying barrier analysis principles to agricultural programming scenarios using case studies.*

### Workshop on Community-based Sustainable Agriculture

Community-based sustainable agriculture (CBSA) is a holistic approach that emphasizes the participation of local communities in the planning, implementation, and management of sustainable farming practices, based on the principle that communities are best equipped to understand and address their own needs. This approach offers opportunities such as protecting the environment by implementing programs to conserve soil and water resources, reduce pollution, and promote biodiversity. It also creates job opportunities including for women and other marginalized groups. However, challenges include a lack of policies, financing, leadership, know-how, and community engagement.

An online workshop on Community-based Sustainable Agriculture was implemented 28–30 November by the NPS and APO Secretariat. Twenty-six participants from 10 APO members attended. Four resource persons from India, the ROK, the Philippines, and Turkiye led the sessions.

**Program coverage:** *Overview of the CBSA approach in the EU and implications for the Asia-Pacific region; Overview of CBSA in South Asia; Case studies from India, the ROK, the Philippines, and Turkiye; and Key success factors for promoting CBSA.*

### Workshop on Social Entrepreneurship for Persons with Disabilities

Social entrepreneurship can provide potential solutions to address barriers and create new opportunities for PWDs. Unemployment, underemployment, and exclusion of PWDs from the labor market incur social and economic losses estimated at 3–7% of GDP in Africa and Asia. It is crucial



to incorporate disability inclusion while designing policies to support decent work and productive employment. Social entrepreneurship offers tools for addressing the challenges faced by PWDs to overcome barriers and generate multiplier effects.

A workshop on Social Entrepreneurship for Persons with Disabilities was held 14–17 November in Vientiane, Lao PDR, hosted by the LNPO and APO Secretariat. Twenty-two participants from 14 APO members attended, and three resource persons from Japan, Lao PDR, and the Philippines led the discussions of social entrepreneurship initiatives for PWDs and strategies to offer more opportunities to improve productivity and create new opportunities for PWDs.

**Program coverage:** *Introduction to social entrepreneurship; Challenges and needs of PWDs; Identifying opportunities for social entrepreneurship; Skills and techniques for social entrepreneurship; Strategies for improving productivity and creating new opportunities for PWDs; and Examining successful social entrepreneurship models and case studies. Site visits were hosted by the Cooperative Orthotic and Prosthetic Enterprise (COPE) Visitor Center, Women with Disability Association, and Lao Pride Inc. Co., Ltd.*

### Multicountry Observational Study Mission on Well-being and Productivity

Encouraging productivity and well-being is crucial for the success of both individuals and organizations. The WHO defines “well-being” as the positive state experienced by individuals and societies, which is determined by social, economic, and environmental conditions. By acknowledging the link between productivity and well-being, organizations can establish good cultures. It is essential to include work–life balance, flexible work schedules, and employee skill development. Maintaining the health and well-being of employees not only boosts output but also energizes businesses, improving performance and profitability in the long run.

The APO Secretariat organized a multicountry observational study mission on Well-being and Productivity, 14–15 November, which was attended by 46 participants from 12 members. It was facilitated by four resource persons from India, I.R. Iran, Japan, and the UK.

**Program coverage:** *Overview of correlations between health and worker performance, their impact on productivity, and how to manage levels; Work–life balance, mindfulness, emotional intelligence, motivation, and organizational ikigai; Factors affecting well-being and productivity; and How regulations and policies can boost health and productivity management at national level.*

### Conference on Women's Leadership in Public-sector Organizations for Productivity Enhancement

Women hold fewer than 45% of leadership roles in the Asia-Pacific in both the public and private sectors. The necessity to increase the participation of women in leadership positions must be made clear to decisionmakers and government officials. Public institutions should place a high priority on adopting more inclusive policies, encouraging the presence of women as dynamic leaders, and assisting female leadership role models.

In collaboration with the Ministry of Manpower of the Republic of Indonesia, the APO organized a Conference on Women's Leadership in Public-sector Organizations for Productivity Enhancement, 27–28 September, which was attended by 104 participants from 16 members. It was facilitated by five resource persons, two from Indonesia, one from the ROK, one from Malaysia, and one from Sri Lanka.

**Program coverage:** *Women's empowerment through social inclusiveness and diversity in the working environment; Female contributions in employment, management, and leadership; Barriers to and challenges in women's empowerment; National policy and human resources development policies to promote women's leadership and empowerment; How to assess diversity and inclusion; Women's leadership and productivity; Solutions for different institutions to empower female leadership; and Case studies.*

### iii. Productivity Gainsharing

#### Training Course on Productivity Gainsharing in Agribusiness Enterprises

Gainsharing is an organization-wide performance-related pay system in which both employees and management receive increased benefits as a result of improved productivity, which is commonly practiced in the manufacturing sector. However, apart from cooperative gainsharing models in the ROC, Japan, and the ROK, gainsharing is not widely used in the agribusiness sector in other APO members. Gainsharing has the potential to contribute to agricultural productivity by giving farmers, actors in supply chains, and employees a greater sense of ownership and enabling companies to make higher profits through increased productivity and efficiency throughout supply chains. Successful gainsharing schemes lead to improvements in the quality and productivity of workers.

In collaboration with the NPO of Pakistan, a face-to-face training course on Productivity Gainsharing in Agribusiness Enterprises was implemented 13–17 March in Islamabad. Twenty-eight participants from 10 APO members attended. Three resource persons from Bangladesh, Malaysia, and Pakistan presented aspects of gainsharing, including methodologies, tools, case studies, public-sector policies, and digitalization.

**Program coverage:** Overview of gainsharing and its concept, tools, and benefits; Case studies of the community enterprise approach and Cameron Highlands Central Agrobusiness Enterprise (value of incentives); and Gainsharing approaches, combined model, eSPO, digital scope, and PLWS framework. Field visits were hosted by the GR Farm and NARC.

## Regional Catalyst

### i. Certification and Accreditation

#### APO Accreditation Body Council Meeting

The APO Accreditation Body (APO-AB) Council is the highest forum to formulate policies relating to the APO-AB accreditation system, review progress of the APO-AB, formulate the APO-AB annual strategic plan, and give directions. After setting up the APO-AB Council 2023–25, which was endorsed by the APO Governing Body, the 5th annual meeting of the APO-AB was held from 15 to 16 March in Ulaanbaatar, Mongolia, hosted by the MPO.

The face-to-face meeting held after three years of disruption caused by the COVID-19 pandemic was attended by the newly appointed APO-AB Council members for 2023–25 and representatives of two members. The council meeting was attended by nine council members, two representatives and three technical experts. The meeting unanimously appointed the APO Secretary-General as the Chair for 2023–25. The meeting emphasized strengthening the APO-AB accreditation system and certification schemes for harmonization and providing greater benefit to APO certification bodies (CBs). The progress of CB development as well as APO-AB documents and procedures was reviewed and important aspects to promote APO-accredited CBs and establish mutual recognition agreements among APO members were also discussed.

#### Management of the APO Accreditation and Certification Program

The APO Accreditation and Certification Program strategizes action plans to align activities and outputs with the overall goals of the APO Vision 2025. One initiative supports members in productivity efforts through the accreditation of CBs for operating the APO certification of productivity specialists.

The program focuses on developing, implementing, and reviewing all activities related to accreditation and certification to cater to the needs of CBs, tap new opportunities, and adhere to international standards. In 2023, the program continued to support CBs in meeting APO-AB standards; update the APO-AB standards to meet the needs of APO-accredited CBs and NPOs aspiring to be CBs; review the progress of accredited CBs and ensure that they comply with APO-AB standards; and provide technical assistance and financial support to CB promotion campaigns in member economies.

In 2023, the APO-AB granted accreditation to four new CBs, the NPC-CB (India), IPCB (I.R. Iran), and PCBP (Pakistan) for operating the Productivity Specialists certification scheme, and PCAP (Indonesia) for operating the Green Productivity Specialists certification scheme. A total of seven CBs have been accredited by the APO-AB since the program was introduced in 2018.

#### *APO Accreditation and Certification Program*

Subject	Venue	Participants	Resource Persons
Productivity Specialists	India	N/A	3
	I.R. Iran	N/A	3
	Pakistan	N/A	3
	Mongolia	N/A	2
Green Productivity Specialists	Indonesia	N/A	3
APO-AB Document Review	APO Secretariat	N/A	4
APO-AB Assessors Workshop	Malaysia	N/A	6
Technical Working Group Meeting	Indonesia	N/A	7

#### **Promotion of APO-accredited CBs**

For strengthening APO-accredited CBs and their certification services, CBs are offered technical assistance to organize awareness campaigns on the productivity certification schemes in their countries, which may include training, consultancy, development of promotional materials, promotional events, etc. The Secretariat also provides financial assistance to the concerned CBs.

In 2023, the MPO-CB (Mongolia) organized national campaigns for promoting certification schemes to increase the interest of stakeholders in participating in the certification of productivity specialists. The PCBP also conducted a nationwide promotional campaign in Pakistan.

#### **APO-AB Assessors' Calibration Workshop**

The APO-AB Secretariat organized an APO-AB Assessors' Calibration Workshop from 17 to 19 August in Kuala Lumpur, Malaysia, attended by a group of APO-AB assessors involved in accreditation of CBs. The objective was to review assessment criteria and guidelines for assessors. The outcomes of the workshop were improvements in the accreditation procedures and assessment framework; enhanced understanding among assessors of the APO-AB standard; alignment and updating of the APO-AB standard to match international standards; and development of an action plan and guidelines for addressing, maintaining, and sustaining impartiality in CBs.

#### **Technical Working Group (TWG) Meeting on Harmonization and Standardization of APO-PS 101:2019 Requirements for Productivity Specialists and APO-GPS 201:2019 Certification Scheme and Competency Standard for Green Productivity Specialists**

The APO Secretariat organized a TWG meeting, 24–26 October, in Yogyakarta, Indonesia. The objectives were to review the APO-PS 101:2019 and APO-GPS 201:2019 certification schemes based on feedback from the APO-AB Council, assessors, and accredited CBs. As a result, both certification schemes were revised and updated. The revised schemes are now known as APO-PS 101:2023 Requirements for Productivity Specialists and APO-GPS 201:2023 Requirements for Green Productivity Specialists.

### Training Course for Assessors of the Productivity Specialists Certification Program

APO-AB-accredited CBs operate the APO-PS 101 Requirements for Productivity Specialists certification of persons scheme. CBs conduct comprehensive assessments before issuing certification to candidates, and participants are expected to continue serving CBs as internal or external assessors after completion of training.

In collaboration with the NPO, Pakistan, the APO Secretariat conducted a training course for Assessors of the Productivity Specialist Certification Program, 4–8 September, in Islamabad. Twenty-two individuals from nine APO members, including five from Pakistan, attended the course. The sessions were led by four resource persons from Malaysia, Mongolia, Pakistan, and Singapore to develop competent assessors for APO-PS 101.

**Program coverage:** Certification levels; Prerequisites and competency requirements for productivity specialists; Roles and responsibilities of assessors; Assessment methods for productivity domain expertise, process skills, and people skills; Certification and recertification process for productivity specialists; Assessors' code of conduct; Case studies of the MPC-CB and PCBP; Group activities and presentations; and Course test.

### Training Course for Assessors of the Green Productivity Specialist Certification Program

The APO Accreditation Program is a strategic initiative that involves certification and recertification of CBs in APO members to operate productivity specialist-related schemes. Accredited CBs develop competent productivity specialists in APO members who can contribute to productivity improvement in their countries and other APO members. The APO-GPS 201:2019 Certification Scheme and Competency Standard for Green Productivity Specialists is operated by APO-accredited CBs. CBs conduct comprehensive assessments before issuing certification to candidates. A CB must build up a pool of qualified assessors to ensure the quality of candidates who apply for accreditation.

The APO Secretariat in collaboration with the VNPI organized an online training course for Assessors of the Green Productivity Specialist Certification Program, 11–14 July. Thirty-seven individuals from 13 APO members, including nine from Vietnam, attended the course. The sessions were led by three resource persons from Indonesia, Malaysia, and Norway and developed competent assessors for APO-GPS 201.

**Program coverage:** Certification levels; Prerequisites and competency requirements for GP specialists; Roles and responsibilities of assessors; Assessment methods for GP domain expertise; GP specialist skills; Certification and recertification processes; and Course test.

### Workshop on Management of the APO Certification Bodies of Productivity Specialists

With the introduction of the Certification Body Development (CBD) Program, APO-accredited CBs must comply with APO-AB standards at all times, including procedures; standards for competency, skills, and knowledge; organizational structure; and productivity-related schemes. This project was designed to enhance the capability of NPOs or their affiliated organizations to act as CBs.

The APO Secretariat in collaboration with the MPC organized an online workshop on Management of the APO Certification Bodies of Productivity Specialists, 13–15 June. Forty-three individuals from 13 APO members, including 10 from Malaysia, attended the workshop. The sessions were conducted by two resource persons from Indonesia and one each from Malaysia and Singapore. The workshop explained the APO Accreditation and Certification Program and how to build the capacity of participants for the effective operation of CBs.

**Program coverage:** APO-AB 1003:2020 General Requirements for Certification Bodies; Certification of Persons Scheme; APO Certification of Persons Schemes; Managing CB documentation and

*implementation tasks; APO-AB 4001:2020 Procedure for Accreditation of Certification Bodies; Best practice sharing by CBs; Assessment and certification process; and Issues and challenges faced by CBs.*

## **ii. Digital-learning Platform**

The Digital-learning Program offers the opportunity for everyone in member and nonmember economies to enroll in APO e-courses on various subjects related to productivity enhancement. It covers a wide range of topics including manufacturing, agriculture, the public sector, and services. In 2023, the APO offered 20 new courses, while 67 existing ones were continued. The Secretariat observed an increase in registration and completion rates of participants/enrollees in the different courses.

### **New Courses on Agricultural Productivity**

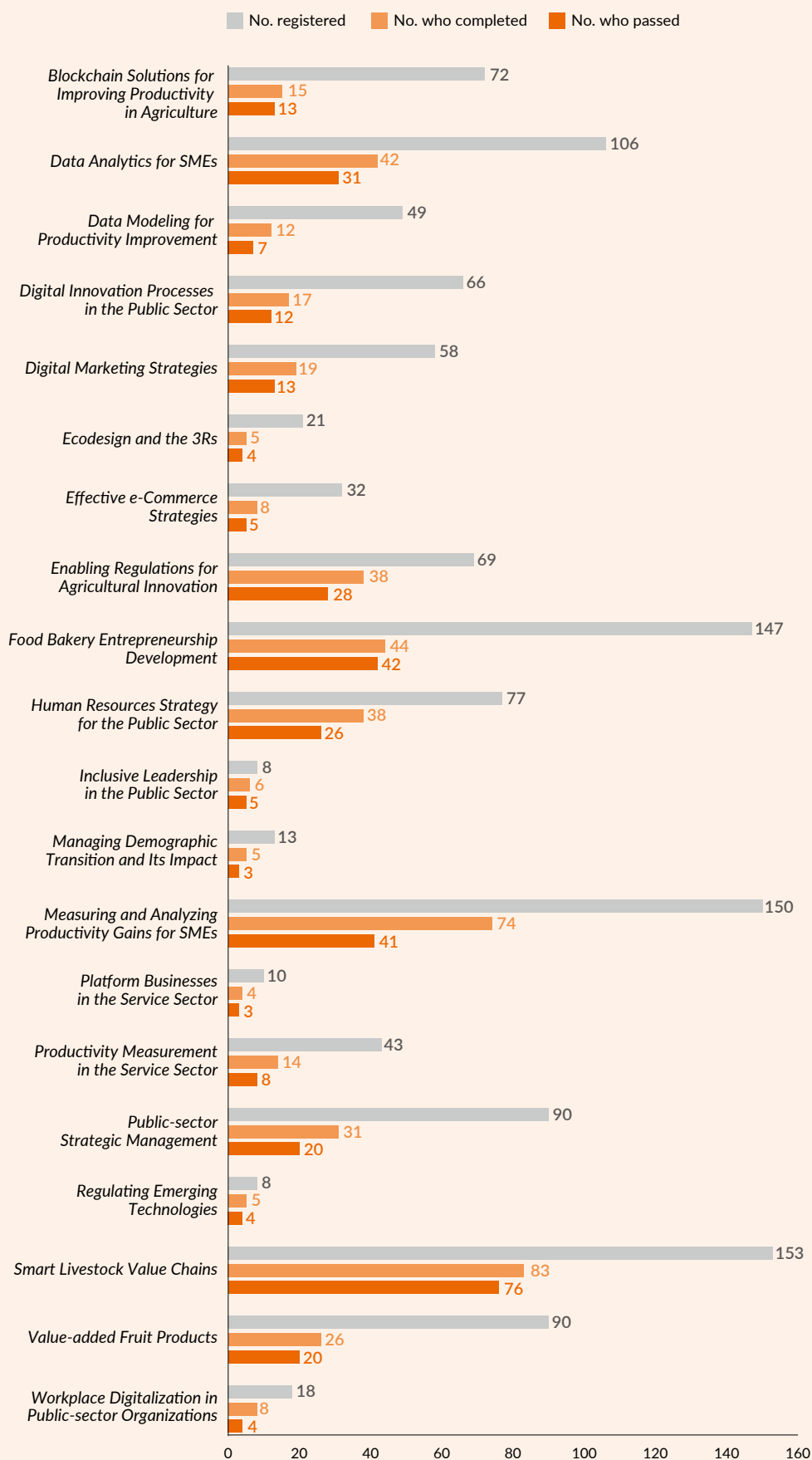
Five e-learning courses on agriculture were launched in 2023: Blockchain Solutions for Improving Productivity in Agriculture; Enabling Regulations for Agricultural Innovation; Food Bakery Entrepreneurship Development; Smart Livestock Value Chains; and Value-added Fruit Products. They started from the beginning of and late 2023 and will continue. As of December 2023, 531 participants had enrolled in the agricultural productivity courses, of whom 87% were from member countries, while the remainder were from Benin, Bhutan, Bolivia, Bulgaria, Côte d'Ivoire, Egypt, Greece, Iraq, Jordan, Kenya, Kuwait, Lebanon, Malta, Mexico, Morocco, Myanmar, New Zealand, Nigeria, Romania, Rwanda, Saudi Arabia, South Africa, Tanzania, Uganda, UAE, and the UK. One hundred fifty-seven from APO members had passed the final examination required to receive the APO certificate.

### **New Courses on Industry, Public Sector, Green Productivity, and Productivity Tools and Techniques**

To spread productivity awareness and knowledge of methods, tools, and techniques related to technical advances and developments throughout the Asia-Pacific region and elsewhere, 15 new industry/service-specific self-learning courses were offered during the year. The topics covered were: Data Analytics for SMEs; Data Modeling for Productivity Improvement; Digital Innovation Processes in the Public Sector; Digital Marketing Strategies; Ecodesign and the 3Rs; Effective e-Commerce Strategies; Human Resources Strategy for the Public Sector; Inclusive Leadership in the Public Sector; Managing Demographic Transition and Its Impact; Measuring and Analyzing Productivity Gains for SMEs; Platform Businesses in the Service Sector; Productivity Measurement in the Service Sector; Public-sector Strategic Management; Regulating Emerging Technologies; and Workplace Digitalization in Public-sector Organizations. All newly released courses introduced the video format to improve content quality and engagement.

A total of 749 participants, 94% of whom were from member economies, registered in the industry and service-sector courses during 2023, and 186 passed the final examination and received the APO certificate. The courses also attracted participants from outside the membership, such as those residing in Andorra, Australia, Canada, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Malawi, Nigeria, Papua New Guinea, UAE, the UK, the USA, and Zambia.

Courses released in 2023 (no. registered, completed, and passed)





## Continued Courses

For the 67 continued courses, there were 3,908 new enrollees, of whom 1,402 passed the final examination and received APO certificates. The course on the Occupational Health and Safety Management System (OHSAS 18001) attracted the highest enrollment at 247 individuals, followed by Green Productivity Tools and Techniques at 234.

## APO Productivity Talks

As an information clearinghouse, one of the APO's key responsibilities is to share knowledge and expertise on productivity-related topics. The purpose of the Productivity Talk (P-Talk) series is aligned with that role, including the provision of up-to-date information on specific topics.

In 2020, the Secretariat began arranging a series of live P-Talks with productivity experts, representatives of international organizations, academics, and renowned specialists. Following their enthusiastic reception, the P-Talks continued in 2021, 2022, and 2023 with the addition of the P-Innovator and P-Gemba series to promote new productivity-related innovations, research, products, and services. The one-hour live or recorded sessions are broadcast through the APO YouTube channel and promoted via social network services such as Facebook, X (formerly Twitter), and LinkedIn.

In 2023, 30 P-Talk sessions were organized, featuring 39 speakers/resource persons from around the world. The sessions had an average of 3,000+ views per month, more than 4,800 YouTube subscribers, more than 1,000 likes, and 1,600 shares. From the perspective of Vision 2025, the P-Talk topics were thoughtfully aligned with Smart Transformation (12); Quality of the Workforce (5); Robust Ecosystem and Regulatory Framework (3); Innovation Capability (8); SME Development (1); and Productivity Gainsharing (1). These well-structured discussions exemplify the APO's commitment to the Vision 2025 goals and dedication to meeting them. In addition, five new P-Insights articles were published: Confronting Asia's Challenging Demographic Realities; Knowledge Management and Innovation: Thriving in the Global Knowledge Economy; Rapid Cost Reduction Approaches for SMEs; Untold Essence of the Toyota Production System (TPS); and Innovation Ecosystems to Drive Productivity.

The APO will continue to utilize digital platforms and seek fresh, creative ways to expand its outreach to member countries and beyond.

## Productivity Gemba Video (Series 1 and Series 2)

Under a special cash grant from the Government of Japan, the APO Secretariat in collaboration with the JPC developed a series of videos focusing on Japanese methods for enhancing productivity and quality in the manufacturing, service, and agriculture sectors. Emphasizing "gemba," a Japanese word that may literally be translated as "site," the videos showcase the best practices of Japanese companies in applying productivity enhancement methods.

The project started with the first series in 2022 with seven videos developed and uploaded on the APO YouTube channel in 2023. A total of five experts were involved in this project. The project continued with the second series in 2023. In contrast with the first series, the scope of the second series has been expanded by exploring gemba in more specific topics such as efficient fresh-food cold chains, Green Productivity through environmentally friendly plastic collection and recycling businesses, effective digitalization of SMEs, and others that contribute to productivity enhancement. Continuing its collaboration with the JPC, six new videos were developed and will be uploaded on the YouTube channel by April 2024. Five productivity experts and six selected companies in Japan were involved in this project.

**Program coverage:** *Balancing environmental conservation and economic activity; Creating a kaizen culture; Discovering a new horizon in the bus tour industry through digitalization; The inclusive workplace; Quality control of fresh produce; and Food safety management.*

### iii. Research and Program Development

#### Research on Reskilling Workers to Enhance Labor Productivity

Structural unemployment stemming from technological advances, particularly for workers whose skills do not align with evolving efficiency and productivity requirements, is a matter of concern for policymakers. Addressing this challenge necessitates comprehensive, inclusive national reskilling strategies to ensure that workers have ample opportunities to either broaden or update their skillsets to meet the demands of the emerging labor market, facilitating smoother structural adjustments. National strategies must remain dynamic, allowing for easy adaptation to evolving labor and training needs.

In December 2019, the APO initiated a research project on Reskilling Workers to Enhance Labor Productivity. Guided by a chief expert from Australia, six national experts from India, Indonesia, the ROK, Malaysia, the Philippines, and Thailand contributed to the research on identifying sustainable, inclusive models for reskilling and upskilling the existing workforce in APO members, with a focus on groups at risk of missing out on such opportunities. The research documented innovative models for improving productivity while safeguarding livelihoods in APO member economies. The final report, incorporating recommendations for applying these models in various employment contexts, was completed in October 2023.

**Program coverage:** *In-depth country/case studies on labor reskilling; National reskilling strategies; Proposals for reskilling models; and Policy recommendations on reskilling based on member case studies.*

#### Research on Smart Agricultural Transformation for APO Member Countries

The APO initiative to transform agriculture is a comprehensive effort to respond to the most pressing challenges faced while maximizing the opportunities they present. Transforming agriculture can enhance its role as a primary connection between people and the planet. The initiative can also help meet multiple UN SDGs. However, certain prerequisites must be met for optimal agricultural transformation. Integrating transformation strategies into national economic development plans is one necessary condition but not sufficient in isolation. Other readiness factors must be addressed for the transformation to be successful.

A research project on Smart Agricultural Transformation (SAT) for APO Member Countries was completed with the publication of the final report. Five APO members, India, Indonesia, Pakistan, Thailand, and Vietnam, participated with chief experts from the ROC and Philippines. The objectives of the research were to assess the readiness of selected member countries for the adoption of SAT, identify national institutional arrangements and mechanisms needed to reap the benefits from transforming into smart agriculture adopters, and generate a set of strategies and policy recommendations to speed up SAT.

**Program coverage:** *National readiness assessment for SAT; Country case studies on SAT; Policy recommendations to move toward SAT; and Final report publication.*

#### Research on Hotel Productivity

The hospitality and hotel industry is a key player in the tourism landscape and a major contributor to the economies of APO members. It is important to ensure that hotels continue to raise productivity levels to maintain sustainability and continuous growth, particularly for those operating in a manpower-scarce environment. To ensure sustainable hotel performance, promote industry competitiveness, and support a pro-business regulatory environment, it is essential to develop a vibrant, innovative hotel sector. The COVID-19 pandemic has adversely affected the hotel industry, and it is crucial to understand its productivity levels by providing benchmarking indicators to compare performance in different Asian cities.

A research project on Intercity Benchmarking Research on Hotel Productivity in Asia was completed with the publication of the final report. In collaboration with the Singapore Tourism Board and engagement of the external consulting agency Frost and Sullivan, the objective of the research project was to benchmark and compare the productivity levels of the hotel industry in seven Asian cities (Hong Kong, Tokyo, Seoul, Singapore, Bangkok, Taipei, and Kuala Lumpur) and provide recommendations and insights on best practices that are applicable to the overall hotel industry to increase productivity.

**Program coverage:** *In-depth research on and comparative analysis of hotel productivity indicators across cities and tiers; Recommendations, insights, and best practices; and Final publication of the report.*

### Research on Digital Disruption: Policy Tasks and Responses by Governments

The dawn of the digital economy increased opportunities for firms to produce and provide goods and services more efficiently, resulting in significant positive impacts on productivity. Socioeconomic development would slow significantly if countries failed to address the wave of digital technological changes. Accelerating advances in digital technologies are spawning myriad opportunities both socially and economically in APO members, and gaining maximum benefit from them requires positive policy and regulatory actions to overcome reluctance by industries and citizens to embrace the associated transformations and to deal with roadblock issues such as trust and privacy.

A research project on Digital Disruption: Policy Tasks and Responses by Governments was completed with the publication of the final report. In collaboration with the University of Technology of Sydney, the research objectives were to analyze initiatives, policies, and regulations that will deliver benefits from technological advances while enhancing productivity, economic growth, and competitiveness in member economies and suggest potential new policies and digital technology framework approaches for APO members.

**Program coverage:** *In-depth research and analysis on the impact of the digital economy; Interviews with key stakeholders in advanced countries; Generating a framework and recommended approaches for APO member economies; and Final publication of the report.*

### Research on Labor Market Policies for Changing Market Demands

Prudent labor market policy responses are imperative to preempt job losses resulting from technological progress. Several seminal studies forewarned of an imminent transformation in the labor markets of both developed and developing nations as they embrace digital technologies. Those studies underscored the potential for automation, driven by digital technology, to induce job losses on a scale that could disrupt an economy's path to prosperity.

To circumvent technology-induced structural unemployment, APO members must implement skill adjustments, policies, and programs that align with the evolving demands of the labor market. Many existing labor force skills are poised to become obsolete, making room for the emergence of new, more specialized skills. Recognizing this, the APO initiated a research project to scrutinize shifting labor market demands and provide guidance to policymakers, governments, and relevant stakeholders on workforce preparedness. Eleven national experts, led by a chief expert from the ROC, were involved in this project. The conclusive research findings were published in October 2023.

**Program coverage:** *Review of national labor training and reskilling strategies; Labor market transition opportunities; and Strategic policy directions for cultivating new talent for the future.*

### Research on Innovation-led Productivity Growth for Middle-income Trap Avoidance

Innovation is an important source of growth when a country reaches the rank of middle-income

economy (MIE) and moves closer to the technological frontier. Fostering innovation to boost productivity performance and economic growth is a way to avoid the middle-income trap, a challenge for the majority of APO members. Sustaining the contribution of total factor productivity (TFP) to overall GDP growth and evolving into the high-income category are the ultimate goals of many APO member governments.

The report resulting from the research on Innovation-led Productivity Growth for Middle-income Trap Avoidance was published in 2023. With the participation of India, Pakistan, Sri Lanka, Thailand, and Vietnam, the objective of the research project was to analyze bottlenecks in the economic growth of middle-income APO member economies and review the effectiveness of innovation policies for productivity growth and their implications for middle-income trap avoidance.

**Program coverage:** *Middle-income countries; Innovation-led productivity growth; TFP; Middle-income trap avoidance; Policy recommendations; and Final publication of the report.*

### Research on an Aging Asia and Pacific: Preparing for the Future

The swift acceleration of population growth among individuals aged 60 years and older presents a multitude of socioeconomic challenges. These challenges encompass a diminishing workforce, a constricted middle segment where the contracting labor force may face heightened tax burdens to sustain pensions for senior citizens, economic deceleration, escalating healthcare expenditures, and more. The repercussions of a diminishing workforce extend to potential impediments to achieving productivity growth. Proactively preparing society for the consequences of population aging through well-crafted public policies is imperative, as last-minute preparations may prove insufficient.

Commencing in October 2021, an APO research initiative delved into the strategies adopted by three participating members to address the challenges posed by aging societies. The research aimed to identify measures and solutions for enhanced preparedness. Recommendations pertaining to effective public policies concerning healthcare, pensions, and increasing birth rates were formulated. Led by a chief expert from the ROC, the two national experts involved in the project successfully concluded their work in December 2023.

**Program coverage:** *Updates and analysis of aging populations; Measurements for aging societies; Sectoral impacts of an aging society; and Forward-looking policies.*

### Research on Emerging Needs of APO Member Economies

Continuous assessment of emerging needs will help private-sector firms rebound and regrow. It has become more relevant than ever to understand the challenges and needs in reviving the productivity movement in APO member economies in the aftermath of the pandemic. In addition, redirecting the focus of support for sustainable business recovery will involve the adoption of innovations for higher productivity. By analyzing the success factors of private-sector firms, this research will generate recommendations on approaches and techniques for successful business operations.

The research on Emerging Needs of APO Member Economies was ongoing in 2023 with the participation of seven member economies. The objective is to determine emerging needs for productivity enhancement by exploring successful business models adopted in private-sector firms and evaluating the connection between deployment of best business practices and productivity. The report is expected to be published in December 2024.

**Program coverage:** *Business resilience and innovation; Best practices to build resilience in private-sector firms; Sustainable recovery and future productivity enhancement needs; and Coordination meeting.*

### Productivity Analysis Series (2023)

In its role as a regional adviser and think tank, the APO has conducted various research projects to examine productivity trends and the economic growth performance of its members. Those cross-country research projects resulted in key findings and recommendations that served as insights for productivity-enhancing policymaking in APO economies. Moreover, tapping the networks of national institutes that are well versed in local situations and have a good understanding of key policy issues enables the APO to stay abreast of the latest productivity trends and challenges to be addressed at national level.

The APO is embarking on the Productivity Analysis Series project by collaborating with national institutes specializing in productivity and economic development studies in its members. The collaboration on analyses of current productivity issues also supports the widening of networks and strengthening partnerships of NPOs, giving them greater leverage as policy partners of governments. The official publication of the 2023 Productivity Analysis Series focused on productivity issues and challenges posed by the pandemic articulated in separate reports from three research institutes in India, Pakistan, and the Philippines.

**Program coverage:** *Changes in the national landscape; Emerging national economic and social trends; Productivity issues and challenges created by the COVID-19 pandemic; Economic resilience; Best practices of productivity enhancement policies; New opportunities for rebound and regrowth; and Evidence-based productivity-enhancing policy advisory.*

### APO Productivity Databook and Database 2023

The APO conducts annual research projects on productivity measurement and developed a comprehensive productivity database. The 16th edition of the *APO Productivity Databook* provides comprehensive analyses of Asia's economic growth and productivity from 1970 to 2021, with projections to 2030. Baseline indicators are provided for 31 Asian economies, including 21 APO members, 10 nonmembers, and reference economies such as Australia, France, Italy, Germany, New Zealand, the UK, and USA. A detailed productivity account in the APO Productivity Database (APO-PDB) is developed for 21 APO members, four nonmember Asian countries, and the USA, with detailed insights on the roles of capital and labor inputs and TFP in economic growth.

Authored by Dr. Koji Nomura and Dr. Fukunari Kimura of the Keio Economic Observatory, Keio University, Tokyo, this edition introduces new methodologies in the APO-PDB 2023, including capitalization of mineral and energy resources and improved estimates of land stock and labor quality. It serves as a practical reference for policymakers and researchers on industry structures and their influence on labor productivity in Asia and beyond.

**Program coverage:** *Comparative analyses of labor productivity and sources of economic growth; Forecasting Asian economic growth and productivity indicators; TFP analysis; and APO-PDB.*

### Asian Productivity Outlook (2023)

As a part of its think tank and information dissemination functions, the APO produces statistics and analyses to report productivity trends and progress in its members. The *APO Productivity Outlook* series, using a sectoral productivity decomposition approach, reveals not only the source of a country's economic dynamics and characteristics but also its strengths and weaknesses. In 2022, the inaugural edition of the *APO Productivity Outlook* was published to provide key insights into prospects for productivity through a sectoral lens with a focus on the manufacturing sector and related issues in APO members.

The *APO Productivity Outlook 2023* was completed with the publication of the final report. The objectives of the research were to analyze the status, determinants, and prospects of service-sector labor productivity; examine challenges brought about by the COVID-19 pandemic to the service

sectors in APO members; and provide evidence-based policy implications to enhance service-sector labor productivity. The Korea Development Institute (KDI) participated in this research and contributed to the publication of the results.

**Program coverage:** APO Productivity Outlook 2023; Cross-country comparative analyses; TFP; Employment growth decomposition; Economic impacts of the service sector; Determinants of service-sector labor productivity; Business continuity; Service-sector productivity outlook; and Final publication of the report.

### Research on the Productive Employment Index

Generating full employment is the goal of many governments to enhance economic development. Employment-creation drives, however, need to be complemented by the quality aspects of jobs to provide a holistic picture of the performance and productivity of the workforce. Labor market policies therefore should incorporate consideration of such aspects as productive employment and the quality of employment. Productive employment allows workers a level of consumption above the poverty line. It ensures sufficient return on labor, enabling workers to escape from poverty. It therefore represents changes in workers' quality of life.

The report resulting from the research on the Productive Employment Index was published in 2023. With the participation of nine APO members, the objective of the research was to measure levels of productive employment and quality of employment and analyze their impact on labor market performance. The report also provided some policy proposals on promoting the well-being of workers while enhancing productivity performance.

**Program coverage:** Measurement of productive employment; Dimensions of the quality of employment; Estimation of the quality of employment index; Statistical framework of productive employment and the quality of employment; and Final publication of the report.

### Research on SME Transformation for Meeting the SDGs

The SME sector plays a dominant role in the economies of all countries and has the potential to promote inclusive, sustainable economic growth, employment, and decent work for all (SDG 8) as well as sustainable industrialization and fostering innovation (SDG 9). One of the means for SMEs to meet the SDGs is by upgrading their resource-efficiency practices and management. Resource-efficient operations improve input-output ratios of natural resources, hence minimizing negative ecological impacts arising from production processes.

A research project on SME Transformation for Meeting the SDGs was completed with the publication of the final report. The objectives of the research were to examine policies and best practices on resource efficiency in SMEs to meet the SDGs, review SME transformation strategies by aligning them with the SDGs, and develop a roadmap for SME transformation to support efforts to achieve the SDGs. Thirteen APO members participated in this research and contributed to the publication of the results.

**Program coverage:** Resource-efficiency policies for SMEs; The SDGs and SME transformation; Productivity growth; Green growth; SME development policies; and Final publication of the report.

### Research on Inclusive Innovation Policies for Economic Growth

There is increasing awareness of unequal rates of participation in innovation, meaning that women, minorities, people with disabilities, immigrants, and those from disadvantaged socioeconomic backgrounds are underrepresented. The COVID-19 pandemic magnified the impacts of this unequal access to innovative employment on livelihoods, so the need for greater social inclusion in innovation across demographic groups, industries, and geographic regions became more urgent. In this



context, “inclusion” refers to greater involvement in and distribution of value-added socioeconomic and environmentally regenerative activities.

A research project on Inclusive Innovation Policies for Economic Growth was completed with the publication of the final report. Six APO members participated in the project with the objective of identifying the range of inclusive innovation policies employed in APO economies and analyzing the role of inclusive innovation policies in removing barriers to the participation of underrepresented actors in innovative activities.

**Program coverage:** *Inclusive innovation policy; Social inclusion: Innovation policy design; and Final publication of the report.*

### Research on National Innovation Systems in Developing APO Members

Innovation systems matter since an economy’s success depends on its national innovation system (NIS) working effectively. An efficient NIS is a prerequisite for productivity growth because innovative capacity sustains productivity. As an economy progresses toward higher productivity levels, policymakers must ensure that their innovation strategies are oriented toward strengthening the NIS and overcoming any weaknesses therein. This requires a comprehensive analysis of the NIS, including its stakeholders and actors along with their connectivity and synergy.

A research project on National Innovation Systems in Developing APO Members was completed with the publication of the final report. The objectives of the research were to analyze commonalities in successful innovation systems in developing APO members, examine the impact of innovation systems on productivity performance, and identify robust NIS for productivity enhancement. Five APO members participated in this research and contributed to the publication of the results.

**Program coverage:** *Innovation policies and benchmarking; Performance analysis of NIS; R&D and innovation ecosystems; National and sectoral innovation management systems; Incentive policies for innovation; and Final publication of the report.*

### Review of Productivity Assessment Tools for the Agriculture Sector

The agriculture sector in Asian countries is continuously evolving. This includes the transition from traditional, low-intensity systems to more modern, higher-intensity ones, with greater capital investment characterized by mechanization and larger-scale farms. Agricultural productivity indicators are an important tool to facilitate sustainable modernization. Their adoption by farmers, agroindustry, and agricultural policymakers is critical for sustained modernization initiatives and requires some prerequisites.

A research project on Review of Productivity Assessment Tools for the Agriculture Sector was initiated with the participation of five APO members. The objective is to review existing agricultural productivity indicators and develop new assessment tools for agricultural productivity to facilitate sustainable modernization of the sector and formulate agricultural modernization business strategies and policies. The report is expected to be published in December 2024.

**Program coverage:** *Agricultural productivity indicators; Agribusiness modernization; Agricultural modernization policies; Agribusiness innovation; Sustainable agricultural modernization; and Virtual coordination meeting.*

### Research on Emerging Needs of APO Member Economies

Ensuring that productivity enhancement remains relevant for socioeconomic progress requires identification of productivity challenges and needs. Digitalization, for example, may boost firm productivity but it can only be achieved if certain conditions can be met. Advanced APO member

economies like the ROC, Japan, the ROK, and Singapore faced different challenges during the earlier pandemic and addressed those challenges efficiently by adopting digital technologies swiftly.

Research on Assessing Emerging Needs of APO Member Countries was ongoing in 2023 with the participation of four APO members. The objective is to examine how the deployment of best business practices could affect productivity and provide guidelines on successful business practices in private-sector firms for widespread adoption in APO member economies. The report is expected to be published in December 2024.

**Program coverage:** *Digital technology adoption in developed APO member economies; Innovative strategies for resilience in private enterprises; Need assessment of selected industries for productivity enhancement; and Coordination meeting.*

### Research on the Informal Sector in APO Member Countries: Issues and Challenges

Certain informal-sector activities have linkages with the formal sector. Even when the linkages exist, informal-sector workers do not always gain in terms of productivity and quality of employment. The best support for informal-sector businesses is to help them graduate to the formal sector, although that graduation may not be straightforward. Some may opt to operate within the informal sector to control costs. For a few others, the barrier is the process of registration to become formal business entities.

The report resulting from the research on the Informal Sector in APO Member Countries: Issues and Challenges was published in 2023. The objective of the research was to analyze existing productivity challenges and issues in the informal sector in APO members and formulate strategies for its overall productivity enhancement. Ten APO members participated in the research.

**Program coverage:** *Informal-sector productivity diagnosis and mapping; Transitioning from the informal to the formal sector; Measurement of informal-sector productivity; Policy interventions and support for the informal sector; and Final publication of the report.*

### Research on Institutional Ecosystems to Drive Productivity

Innovation will flourish when appropriate, effective institutional settings are in place. This requires a set of prerequisites including well-governed arrangements, mechanisms, and interactions among stakeholders, in other words, a conducive institutional ecosystem. Economies with well-established NIS tend to exhibit higher rates of productivity growth. An efficient NIS determines innovation capacities, which in turn contribute to the productivity growth trajectory. A sound NIS also facilitates the creation of policies ensuring that the diffusion of new technologies can generate productivity gains.

A research project on Institutional Ecosystems to Drive Productivity was completed with the publication of the final report. The objective of the research was to examine the role and contributions of NIS in boosting productivity and growth and propose policy recommendations for improving institutional ecosystems to achieve productivity gains. Nine APO members participated in this research and contributed to the publication of the results.

**Program coverage:** *Institutional ecosystem frameworks; Institutional factors of productivity; Quantification of productivity gaps; TFP growth; and Final publication of the report.*

### Policy Study on Productivity-enhancing Structural Transformation in Lower Middle-income Countries

The majority of APO economies are in the lower middle-income category. The key challenge for this group is to sustain their high growth rates. An efficient structural transformation that simultaneously

generates productivity growth within sectors and shifts toward more productive sectors contributes to advancing their economic growth, while avoiding the risk of falling into the middle-income trap. This growth creates more and better-remunerated formal jobs, consequently enabling upward movement on the income ladder.

A research project on Policy Study on Productivity-enhancing Structural Transformation in Lower Middle-income Countries (LMICs) was completed with the publication of the report. The study was conducted in partnership with the Institute of Economic Growth, India, and focused on the analysis of new opportunities and challenges for structural transformation in light of the changes in the pandemic-influenced economic and business landscapes and on identifying new leading sectors and determinants of productivity growth. A set of policy recommendations for effective structural change and industrialization for APO LMICs to foster long-term productivity growth was highlighted in the report.

**Program coverage:** APO policy study; Cross-country comparative analyses; Economic structural transformation; Industrialization process; Industrial upgrading; Economic resilience; Labor productivity growth; Employment growth decomposition; Productivity convergence; and Final publication of the report.

### Policy Study on Productive Economic Structures in High-income Countries

The high-income members of the APO have triggered vast amounts of research from various perspectives on their development models. The inspiring achievements of these economies are attributable to a radical transformation of productive structures, major shifts in the sectoral absorption of labor, and significant improvements in technological sophistication. Recently, however, the productivity and economic performance of these top Asian economies has stagnated, as observed in the downward trend in their economic growth rates. Shifts toward more productive structures will be vital to break the prolonged stagnation in growth.

A final research project report on Policy Study on Productive Economic Structures in High-income Countries was published, with analytical prospects for expansion and diversification of production with smart services, smart agriculture, and smart industry as the key drivers for overcoming stagnation and pushing new growth. In partnership with the Chung-hua Institution of Economic Research, ROC, the report examined the driving factors for building a more productive economic structure for sustaining growth and avoiding the high-income trap and provided policy recommendations to promote innovative economic activities as new sources of growth.

**Program coverage:** APO policy study; Productive, diversified economic structures; High-income stagnation avoidance; Economic resilience; Labor productivity growth; Employment growth decomposition; APO high-income members; and Final publication of the report.

### Productivity Analysis Series (2024)

In today's fast-changing environment, and with the diverse stages of economic development of APO members, more in-depth analyses of country-specific situations are required. Tapping the expertise of national institutes enables the APO to keep up with the latest productivity knowledge and recent challenges in its members. This collaboration also widens networks and strengthens partnerships for a better understanding of productivity development.

The APO initiated the Productivity Analysis series with the objective of addressing key productivity issues and policy priorities for rebound and regrowth to the pre-COVID-19 level in its members. This research project collaborates with one national research institute specializing in productivity and economic development studies from Pakistan to publish the Productivity Analysis series. The partner institute is well versed in local situations and assist governments in policy formulation for productivity growth. The report will be published in 2024.

**Program coverage:** *APO Productivity Analysis series; Emerging national economic and social challenges impacting productivity; Changes in national landscapes; Latest productivity knowledge and applications; In-depth analysis of productivity and economic development; Productivity policy priorities for rebound and regrowth; and Evidence-based productivity-enhancing policies.*

### **APO Productivity Outlook (2024)**

In its role as a think tank, the APO publishes the annual *APO Productivity Outlook* series to monitor economic growth performance and provide insights on productivity prospects in key sectors in its members. Comparative analyses of key trends, factors, and levels of sectoral productivity are conducted to foster evidence-based productivity policymaking. Using a sectoral productivity decomposition approach, the *APO Productivity Outlook 2022* revealed that manufacturing is a crucial source of members' economic dynamics.

In preparation for the *APO Productivity Outlook 2024*, a partnership with the KDI, a renowned think tank in the Asia-Pacific, was formed. The third edition of the *APO Productivity Outlook* series focuses on TFP trends and knowledge spillovers in core manufacturing subsectors. The publication, to be released in 2024, will offer a set of policy implications on the barriers and enablers of knowledge spillovers in the sector.

**Program coverage:** *Manufacturing labor productivity; TFP; Value-added methods; Employment growth decomposition; Global value chain participation; Knowledge spillover effects on productivity; Forward and backward linkage effects; and Employment inducement effects.*

### **Research on the Informal Economy and Productivity Growth**

The informal economy constitutes a large share of employment and output in most APO members. Businesses operating in the informal economy are typically unproductive and stagnant. The expansion of informal business activities poses a critical concern for long-term economic development and an increasing competitive pressure on the performance and innovation of formal firms. Additionally, as among the hardest hit by the COVID-19 pandemic, the expansion of informal-sector firms has heightened the social impact on and threats to inclusive growth agendas.

A research project was launched in June 2023 to examine the status of informal-economy business activities and their statistics in national accounts and analyze the impact of informal-sector business activities on productivity growth. This project is led by a chief expert from India, with national experts from Bangladesh, Cambodia, the ROC, Fiji, India, Lao PDR, Malaysia, Mongolia, Pakistan, Sri Lanka, and Türkiye. The final report, including implications for policy on the informal economy and productivity enhancement, is expected to be submitted in May 2024.

**Program coverage:** *Informal-economy business activities; Informal-sector employment and output statistics in national accounts; Impact of informal-sector business on formal-sector labor productivity; Inclusive economic growth; Policies on informal-sector formalization; Labor market policies; and Social protection policies.*

### **Research on Premature Deindustrialization and Productivity Performance**

The phenomenon of premature deindustrialization, or rapidly declining shares of manufacturing and increasing shares of services at an earlier stage of economic development than in industrialized economies, is prevalent in emerging economies. Premature deindustrialization poses a threat to labor productivity, competitiveness, and future growth prospects. Various middle-income APO members exhibit decreasing outward FDI and low shares of high-tech industries in their export composition and cannot raise their industrial complexity level in global value chains. Relevant industrial and economic policies to keep these economies ahead of premature deindustrialization trends are necessary.

To study the risk of premature deindustrialization among its member economies and estimate the impact of deindustrialization on long-term productivity performance, the APO commenced a research project on premature deindustrialization and productivity performance. One chief expert from the ROC, and nine national experts from Bangladesh, Cambodia, India, Malaysia, Pakistan, the Philippines, Sri Lanka, Thailand, and Turkiye were assigned to conduct the research. The final report, including implications for industry and productivity policies, is expected to be completed in June 2024.

**Program coverage:** *Premature deindustrialization; Economic structural change; Manufacturing and service shares; Industry employment and value-added shares; Labor productivity and TFP performance; Industrial policies; and Economic growth policies.*

### Research on New Dynamics of Global Supply Chains and Implications for Productivity

In the aftermath of the COVID-19 pandemic and increasing tensions in the geopolitical landscape, global supply chains (GSCs) have been drastically reshaped. With multiple sourcing strategies and supply network relocation, global manufacturers have shifted their production sites. The trend of supply chain diversification and relocation could have positive impacts on productivity growth in APO member economies. The questions of whether this business strategy has positive impacts on company productivity, the new GSC dynamics benefit new host countries, and new hosts have sufficient absorptive capacity to benefit from technological spillover effects are worth studying.

Research on New Dynamics of Global Supply Chains and Implications for Productivity was conducted with the objective of analyzing the new dynamics of GSCs post-COVID-19 and determining the level of readiness of human resources to respond to the new GSC dynamics, including their policy implications. Nine APO members participated in the research, and the final report is expected to be published in December 2024.

**Program coverage:** *GSC diversification and relocation strategies; Business strategies; Case studies of manufacturing site shifts; Technological spillovers; Human capital readiness; Human capital for productivity policies; and Coordination meeting.*

### APO Productivity Databook and Database 2024

The APO conducts annual productivity measurement research on productivity trends and economic growth performance in member countries and reference regions to assist economic analysts, policymakers, and development planners in analyzing national productivity performance and socio-economic progress. The APO Productivity Database (PDB) is constructed under an internationally harmonized measurement framework, allows cross-country productivity analyses and comparisons, and can be accessed on the APO website. The 2024 edition of the *APO Productivity Databook* will feature economic growth, labor productivity, and TFP estimates in APO members and selected non-member economies in the Asian region and elsewhere.

The project is in progress with the active involvement of 18 APO members and is anticipated to be finalized within 2024. The objective is to develop comprehensive, harmonized productivity accounts for APO members, selected nonmembers in Asia, and reference economies covering 1970–2022; analyze the productivity performance of APO members, selected nonmembers in Asia, and reference economies; and forecast economic growth and labor productivity trends in APO members up to 2030.

**Program coverage:** *Sources of economic growth covering labor and capital productivity and TFP at aggregate level; Industry origins of economic growth and labor productivity improvement; Energy productivity performance at aggregate level; Maintaining and updating the Asian Economy and Productivity Map; Analyses of labor quality changes to reflect accurate productivity levels; and release of the PDB and APO Productivity Databook 2024.*

### Research on Agile Working Styles for Productivity

Interest in agile working has grown significantly as the COVID-19 pandemic highlighted the need for adaptable, flexible work environments. Despite the advantages of agile working styles, such as enhanced productivity and improved work-life balance, their implementation remains a challenge for many organizations. A comprehensive understanding of agile working practices can provide insights and guidance for organizations seeking to transform their work environments and maximize the benefits of agility.

A research project on Agile Working Styles for Productivity was ongoing in 2023 with the participation of seven APO members. The objective is to explore approaches to create agile workplaces across sectors, determine factors for successful agile implementation, investigate challenges and suggest strategies to overcome them, and provide recommendations for introducing agile practices and addressing key issues faced by employers/employees during adoption. The report is expected to be published in June 2024.

**Program coverage:** *Planning public- and private-sector workplaces; Culture changes for agile work; Challenges and strategies in transitioning to agile work; Agile office designs; Monitoring and measuring performance; Technologies and tools for efficient agile work, including data protection and security; Project management for agile teams; and Work-life balance through agile work.*

### Research on Measuring the Institutional Capacity of Key Productivity-promoting Institutions in APO Members

Strong institutional ecosystems are vital for productivity movements. Institutions require capacity measurement to succeed because it enables them to recognize strengths and shortcomings and boost productivity and efficiency. After the COVID-19 pandemic, the capacities of institutions tasked with enhancing productivity in various sectors to achieve economic growth and raise living standards and well-being must be measured and reevaluated. Measuring capability and devising strategies to strengthen institutions are critical in response to evolving productivity challenges.

The APO initiated a research project in collaboration with the University of Technology Sydney, a public research university in Australia, to measure the capacity of key productivity-promoting institutions in APO members; identify key factors contributing to or hindering institutional capacity to achieve higher productivity performance and adopt innovative approaches; and propose policy recommendations for improving the capacity of productivity-promoting institutions to contribute to overall national growth and development. The final report is expected to be published in June 2024.

**Program coverage:** *Ecosystems and capacity of institutions working for productivity and competitiveness; Economic competitiveness indicators and measurements; Analysis of indicators of the ease of doing business; Promoting productivity through enhanced institutional capacity; and Innovative approaches.*

### Research on Agricultural Productivity in Asia

According to the UN FAO, the agriculture sector must double food, fiber, and fuel production to meet the needs of a world population of more than nine billion in 2050. Natural resource degradation and climate change make this difficult. Increasing agricultural productivity is crucial to reduce rural poverty and achieve food security and economic growth. Poor systems for monitoring productivity in many countries hinder efficient allocation of scarce resources. For governments to devise optimal policy mixes, reliable databases on agricultural resources and their productivity are required.

A research project on Agricultural Productivity in Asia was initiated to measure and monitor agricultural productivity in APO members, examine their agricultural productivity monitoring abilities to strengthen national programs, develop a harmonized regional database on agricultural productivity indicators



for benchmarking, and make policy recommendations for enhancing agricultural productivity in the region. In collaboration with the University of Queensland, Australia, the report is expected to be completed in December 2024.

**Program coverage:** *Trends in world agriculture; Productivity concepts and analytical methods; Measuring productivity changes in agriculture; Economic drivers of productivity in agriculture; Key issues in analyzing agricultural productivity trends in Asia; and Productivity-enhancing policies for the agriculture sector in APO members.*

### Research on Assessing Needs of APO Members

Pandemic-related disruptions affecting SMEs have provided important insights on how to boost the capacity for resilience and creativity, sparking the development of original concepts and prosperous businesses. To encourage the creation of more creative, resilient businesses, it is important to look into the reasons and elements that led to such achievements and assess future needs. SMEs will recover and expand with the aid of continuous assessment of their needs so that appropriate support can be provided to overcome the challenges affecting their growth.

In June 2023, a research project was launched to identify and assess productivity enhancement needs in selected sectors of APO members, analyze challenges and opportunities faced during and after the pandemic, and examine the linkages between business resilience, productivity, and innovation at the enterprise level. This project is led by a chief expert from Cambodia, with national experts from Bangladesh, Cambodia, Fiji, Mongolia, Pakistan, and Sri Lanka. The final report, including recommendations to address the identified needs for strengthening the resiliency and competitiveness of SMEs, is expected to be submitted in April 2024.

**Program coverage:** *Business resilience and innovation; Sustainable recovery; Key driving forces for SME growth and resilience; Innovative strategies for resilience in private-sector firms; and Emerging needs for productivity enhancement.*

### Research on New Productivity Tools in Agriculture

Innovation in agriculture is influenced by socioeconomic conditions, cultural norms, education levels, and access to information. Successful innovation necessitates understanding these factors and designing strategies suiting the diverse contexts of APO members. Predictive agriculture tools are valuable assets for guiding decision-making by providing precise information to improve operational efficiencies through the modeling and simulation of agricultural systems. By harnessing data analytics, machine learning, and predictive modeling, these tools offer insights into complex scenarios, allowing stakeholders to anticipate trends and outcomes. However, the utilization of such tools in agriculture for predicting the adoption of innovation remains an underexplored avenue.

A research project on New Productivity Tools in Agriculture was launched in September 2023. In collaboration with the Commonwealth Scientific and Industrial Research Organization (CSIRO), the project explores digital prediction tools available for adoption in the agriculture sector in APO member economies to develop guidelines on their use to analyze innovation and productivity performance in agriculture and provide learning materials for the agriculture sector in APO members. The final report is expected to be published in August 2024.

**Program coverage:** *Theoretical overview of digital adoption processes for agricultural practices; Guide to the Adoption and Diffusion Outcome Prediction Tool (ADOPT); Case studies of APO member economies; Policy recommendations; and Final publication of the report.*

### Research on New Productivity Tools in the Public Sector

Better regulation is the heart of the policymaking process and anchored on good governance principles

in public administration. Regulatory reform therefore has been undertaken by many governments across the Asia-Pacific region as a strategy to produce tangible results and support inclusive growth, higher productivity, and innovation within the framework of good regulatory management systems. As part of continuing capacity-building initiatives for the public sector, the APO explores and provides know-how on the concepts, essentials, and importance of good regulatory practices to enhance long-term public-sector productivity.

The APO initiated a research project on New Productivity Tools in the Public Sector, in collaboration with the School of Government, Victoria University of Wellington, with the objective of designing quality public regulations to enhance the productivity of the public sector and disseminating a compendium of tools on good regulatory design to improve the performance of public-sector regulatory management systems. The final report is expected to be published in December 2024.

**Program coverage:** *Compilation and review of better regulatory designs in the public sector; Intervention design and analysis strategies of good regulations; Assessment tools for regulatory quality; General regulatory approaches and implications for regulatory quality; and Meeting to develop the overall framework of the tools.*

### Research on Strategic Modeling for Future Agriculture in Asia

Agriculture will be impacted by ongoing climate change, including rising sea levels, droughts, and floods, compounding pressure on food production systems. Due to expected changes in environmental and socioeconomic trends, it is essential to conduct strategic modeling to predict the future of agriculture in Asia.

A research project on Strategic Modeling for Future Agriculture in Asia was initiated to focus on the effects of climate and socioeconomic changes on agricultural productivity and consumption, explore the potential of R&D investments as adaptation measures, project long-term growth based on international modeling, and recommend policies for enhancing agricultural productivity in APO members. In collaboration with the International Food Policy Research Institute (IFPRI), the report is expected to be completed in December 2024.

**Program coverage:** *Strategic modeling of agriculture; Effects of baseline technological growth on agricultural production and markets across Asia and changes due to projected impacts of climate change; Effects of investment in R&D on agricultural production and other climate change-related indicators; and Effects of socioeconomic changes on food demand and diets in the Asia-Pacific.*

### Research on Emerging Trends in APO Members

Digital transformation is an ongoing process that involves the integration of digital technologies into various aspects of business, resulting in new opportunities and challenges for different sectors and economies. Many governments are increasingly adopting such emerging technologies and embracing innovations in the postpandemic era to pursue socioeconomic development. However, the pace of digital transformation in APO members varies, with some sectors and economies quicker to adopt new technologies than others. Moreover, different industries and regions face unique challenges and opportunities as they navigate the digital landscape.

A research project was launched in April 2023 to identify emerging trends in digital transformation in APO members and examine country-specific levels of their adoption and innovation. Twelve APO members participated in the research project to examine levels of adoption of technologies and innovation across different sectors. The final report, including evidence-based policy implications related to the trends in digital transformation for increasing productivity in APO members, will be submitted in March 2024.

**Program coverage:** *Emerging trends in digital transformation and innovation; Impact of emerging trends on productivity and sustainability; Country-specific analysis; and Policy implications of deploying emerging technologies and innovation trends.*

### Research on Public-sector Performance Management in the APO Members

Measuring public-sector productivity within the framework of organizational performance management is currently emphasized. Many APO members have introduced performance management systems covering the individual employee to organizational levels. They aim to create and sustain effective, result-oriented cultures in public-sector organizations while meeting citizens' needs. Although it is not a new concept, the emergence of performance management in the public sector focuses not only on individual employees but also on teams, programs, processes, and organizations as a whole.

A research project on Public-sector Performance Management in the APO Members was initiated with the participation of nine APO economies. The objectives were to review performance management systems in public-sector organizations, undertake comparative analyses, and recommend ways to improve performance management systems in APO members. The final report is expected to be published in December 2024.

**Program coverage:** *Theories and tools of performance management; Performance measurement frameworks for public-sector organizations; Examples of performance management systems in practice in APO members; and Coordination meeting to agree on the research framework and guidelines.*

## iv. Centers of Excellence

### Need and Readiness Assessment Survey for Implementing Climate-change Mitigation and Adaptation Technologies in Agriculture

The Need and Readiness Assessment Survey for Implementing Climate-change Mitigation and Adaptation Technologies in Agriculture was conducted to identify climate-smart agriculture (CSA) stakeholders, their needs, and efforts for greenhouse gas (GHG) emission reductions and absorption. The overall status of policies related to GHG reductions in agriculture and specific efforts to adopt CSA technologies were evaluated. Eight resource persons from Bangladesh, the ROC, Indonesia, India, the ROK, Pakistan, the Philippines, and Thailand contributed to the survey.

The survey identified the needs and readiness of APO members for implementing climate-change mitigation technologies in agriculture, and plans for strengthening CSA in APO members were outlined. Thailand was selected as the pilot project country in 2024 for the introduction of the installation and operation of a web-based soil carbon sequestration visualization tool and the development of carbon credit methodology based on data availability, government support, and previous experience in implementation.

### Strengthening Program for the APO Center of Excellence on Climate-smart Agriculture

This project aimed to strengthen the APO Center of Excellence on Climate-smart Agriculture (COE on CSA) for knowledge exchange to develop and encourage the adoption of low-carbon agricultural technologies and livestock systems in APO members. Two researchers affiliated with the COE on CSA responsible for GHG reduction policies, low-carbon farming, carbon markets, and net-zero livestock management attended an international workshop on low-carbon farming for smallholders in the Asia-Pacific region. Jointly organized by the National Agriculture and Food Research Organization (NARO), the Taiwan Agricultural Research Institute (TARI), and Food and Fertilizer Technology Center (FFTC), the workshop was designed to promote climate-smart, resilient, circular agriculture. Participation in the workshop enabled COE on CSA experts to learn about and share current low-carbon farming technologies. The knowledge gained from the workshop was disseminated to all APO members at an international conference hosted by the COE on CSA in November 2023.

### International Conference on Climate-smart Agriculture

The International Conference on Climate-Smart Agriculture (CSA) took place 8–10 November in Tsukuba, Japan, with a hybrid format allowing the attendance of 110 participants from 13 APO member economies. The event was organized by NARO as the host of the APO COE on CSA. The conference sessions covered a wide range of topics related to climate-smart technologies presented by speakers from NARO research institutes such as the NARO Institute for Agro-Environmental Sciences, NARO Central Region Agricultural Research Center, and NARO Institute of Livestock and Grassland Science. Attendees participated in a workshop on information services related to climate change including the development and application of the 1-km mesh agricultural weather data system, prolonged mid-season drainage, alternate wetting and drying of paddy fields, and use of biochar.

The conference also featured presentations by national resource persons from Bangladesh, the ROC, Indonesia, India, the ROK, Pakistan, the Philippines, and Thailand, who discussed the current situation regarding climate change mitigation and adaptation in their economies. On the third and final day of the conference, attendees had the opportunity to visit the NARO Tsukuba Agriculture Research Hall, NARO Genebank, and Japan International Research Center for Agricultural Sciences. The International Conference on CSA provided a valuable platform for experts, researchers, and policymakers to share knowledge and experiences of innovative solutions for mitigating the impacts of climate change on agriculture and ensuring food security for future generations in the Asia-Pacific region by promoting CSA.

## Strengthening of NPOs and Policy Advisory

### i. Bilateral Cooperation between NPOs

#### Strategic Foresight and Innovation Management

MSMEs have been struggling due to the long-term impacts of COVID-19 and some in Fiji had to close due to the lack of strategic direction and plans. The concepts of strategic foresight and innovation management are being embraced globally to counter the effects of the pandemic. However, there is limited knowledge of these concepts in Fiji, and thus their introduction and promotion could enable companies and organizations to explore and prepare for possible developments to future-proof strategies, identify potential new opportunities and challenges, and design innovative approaches under rapidly evolving circumstances.

A BCN project from Fiji to Thailand on Strategic Foresight and Innovation Management was held 28–31 March. It allowed delegates from Fiji to learn about the productivity initiatives of the FTPI as well as programs and activities of other relevant organizations to promote strategic foresight and innovation. The delegates then discussed future plans and strategies of the NTPC and possible long-term collaboration with FTPI officers.

**Program coverage:** Site visit I: Panyapiwat Technological College; Site visit II: Future Tales Lab of Magnolia Quality Development Corporation (MQDC); Site visit III: National Innovation Agency Policy and National Strategic Plan for Innovation; Site visit IV: School of Interdisciplinary Technology and Innovation, Sripatum University; Site visit V: FTPI; and Site visit VI: Designated Areas for Sustainable Tourism Administration (DASTA).

#### Benchmarking Study on Evaluation System of the Fiji Quality Awards

The NPO, Bangladesh, is working to promote productivity in its industry and service sectors. The

NPO also gives awards to representatives of companies/firms for important contributions to increasing productivity, quality, and business excellence (BE). However, there is a concern in the NPO that the way it evaluates organizations is time-consuming and complicated. Hence, this BCN project was proposed by the NPO to learn how Fiji rewards enterprises demonstrating BE.

The NTPC and APO Secretariat organized an in-country BCN project on Benchmarking Study on the Evaluation System of the Fiji Quality Awards from Bangladesh to Fiji, 21–25 August, which was attended by four participants from the Ministry of Industries and NPO, Bangladesh. The sessions were facilitated by the NTPC.

**Program coverage:** *Fiji BE Awards and evaluation system; and Site visits to the NTPC Head Office, Narere Campus; Energy Fiji Limited; Future Farms Limited T/A Rooster Poultry Ltd; and Jack of Fiji Distribution Centre. Discussions on long-term collaboration between the NPO Bangladesh and NTPC were also held.*

### Productivity Enhancement for SMEs and Organizational Best Practices of Productivity-promoting Institutions

NPOs are the key productivity-promoting institutions in APO members. They must develop and strengthen their capacity to pursue their roles effectively and efficiently. Learning best practices from other NPOs contributes to enhancing organizational capacity.

The MPO and APO Secretariat organized an in-country BCN project on Productivity Enhancement for SMEs and Organizational Best Practices of Productivity-promoting Institutions from Nepal to Mongolia, 7–9 August, which was attended by four participants from the NPEDC. The sessions were facilitated by the MPO and two local resource persons.

**Program coverage:** *Introduction to the NPEDC and objectives of the project; Introduction to the MPO; and Presentations on the productivity promotion activities of the MPO. Collaboration between the MPO and NPEDC to support SMEs was also discussed. Site visits were made to APU Joint-Stock Company, Cabinet Secretariat of Mongolia, and Social Insurance Office of Songino Khairkhan District for learning sessions on practices for implementing quality management system (QMS) in enterprises and public organizations. Site visits to the Ministry of Food, Agriculture, and Light Industry (MOFALI) for a sharing session on the state policy on SMEs in collaboration with the MPO for support to SMEs as well as to Goyol Cashmere LLC were also conducted.*

### Best Practices in Learning Factories

Increasing productivity in manufacturing and accelerating the digital transformation process has long been one of Türkiye's key development agenda items. The Capability and Digital Transformation Centers—Model Factories were established to contribute to policies developed in this area.

The MPC and APO Secretariat organized an in-country BCN project on Best Practices in Learning Factories from Türkiye to Malaysia, 22–25 August, which was attended by four participants from the Ministry of Industry and Technology, Türkiye. The sessions were facilitated by the MPC and two local resource persons, who introduced best practices in the Model Factory and Faculty of Industrial Management (FIM) Learning Factory in lean manufacturing and digital transformation.

**Program coverage:** *The delegates made courtesy visits to the MPC Kuantan, FIM-UMP Gambang, and ICoN UMP Pekan. Site visits were hosted by TT Electronics Sdn. Bhd., Manual Operation Learning Factory, and Smart Operation Teach Factory. Finally, the Turkish delegates attended learning sessions on Technology Adoption and Digitalization, MyMudah, Industry 4WRD Readiness Assessment, and Productivity Champions at the MPC office.*

### Smart Services and Manufacturing for the Elderly Industry

According to UN statistics, the world's population aged 65 or above is more than 800 million and is expected to increase to 1.4 billion by 2030. The WHO estimates that 63% of the global population will be over 65 years old by 2025, and some will live more than a century. By then, the market capitalization of the elder-care sector may be USD37.4 trillion, making it one of the most promising growth areas in the 21st century.

The SGPC and APO Secretariat organized an in-country BCN project on Smart Services and Manufacturing for the Elderly Care Industry from the ROC to Singapore, 31 July–3 August, which was attended by four participants from the CPC. All the learning sessions and site visits were arranged and facilitated by the SGPC.

**Program coverage:** *Sharing sessions at the SGPC office on Landscape and Trends of Elderly Care in Singapore and Technology to Support the Elderly Care Industry; and Online sharing session with the Agency for Integrated Care on support programs for seniors, the disabled, and their caregivers. Site visits were hosted by the Singapore National Employers' Federation (SNEF), Singapore Red Cross, Neeuro, Council for Third Age (C3A), TSAO Foundation, and GentleFoods to learn about their initiatives, products, and services related to the elder-care sector.*

### Innovation, Digital Transformation, and Productivity Improvement

In Fiji, digital transformation through technology is one of the strategies that can be used to increase productivity and support organizational development. The SGPC and APO Secretariat organized an in-country BCN project on Innovation, Digital Transformation, and Productivity Improvement from Fiji to Singapore, 27–30 November, which was attended by four participants from Fiji National University. This BCN project gave delegates an opportunity to observe strategies deployed by Singapore for enhancement of digital transformation through innovation and technology, establishment of the proposed governance mechanism for industrial digital transformation programs through public-private partnerships, and government support programs.

The sessions included site visits to relevant organizations facilitated by the SGPC and one local resource person to allow delegates from Fiji to observe and learn about initiatives and activities on innovation, digital transformation, and business excellence (BE) for productivity improvement in Singapore.

**Program coverage:** *Site visits to the BCA Academy, Singapore Tech (SG Tech), SP's Professional & Adult Continuing Education (PACE) Academy, Temasek Polytechnic, and National Gallery Singapore for sharing their initiatives and activities related to digital transformation. A site visit to Five Star Hainanese Chicken Rice for a sharing session on the SME's BE framework and visit to the SGPC for briefing sessions on support services of Enterprise Singapore and the SGPC for the private sector were also conducted.*

### Sharing ESG Experiences and Information

"Sustainability" is becoming a key management policy for many companies including those in the ROK and Thailand. Not only a focus on corporate social responsibility but also on promoting sustainable development through concepts like ESG (environmental, social, and governance concepts) is gaining international prominence. The Thai government, along with the Securities and Exchange Commission (SEC) and Stock Exchange of Thailand (SET), actively encourages and supports corporate interest and participation in ESG by developing related regulations and indices.

The FTPI and APO Secretariat organized an in-country BCN project on Sharing ESG Experiences and Information from the ROK to Thailand, 12–14 December, which was attended by four participants from the KPC. The sessions, including site visits to relevant organizations, were facilitated by the



FTPI to allow delegates from the ROK to learn about initiatives, policies, key issues, etc., related to ESG initiatives in Thailand.

**Program coverage:** *Visits were hosted by the FTPI; Office of National Higher Education Science, Research, and Innovation Policy Council (NXPO); PTT Public Company Limited; Thailand Greenhouse Gas Management Organization (TGO); Embassy of the Republic of Korea in Thailand; and Korea Trade-Investment Promotion Agency Bangkok Trade Center.*

### Best Practices and New Initiatives on Productivity and Green Growth

Green growth is a term to describe a hypothetical path of economic growth which is environmentally sustainable. It is based on the understanding that as long as economic growth remains a predominant goal, its decoupling from resource use and adverse environmental impacts is required. Green growth is possible only through sustainable practices, resource efficiency, and renewable energy sources. Green growth envisions a future with environmentally sustainable, equitable economic growth, resource security, a healthy environment (air, water, and land), and restored ecosystems with rich biodiversity.

The CPC and APO Secretariat organized an in-country BCN project on Best Practices and New Initiatives on Productivity and Green Growth from India to the ROC, 25–27 October, which was attended by four participants. The sessions, including site visits to relevant organizations, allowed delegates to learn about best practices, initiatives, policies, and key issues related to productivity and green growth.

**Program coverage:** *Visit to the CPC office for discussions and site visits to Delta Electronics, Inc.; Industrial Development Administration, Ministry of Economic Affairs; 7th India and Taiwan Industries Collaboration Summit and Smart Green Technology Forum; Techman Robot Inc.; and Industrial Technology Research Institute.*

### Benchmarking the Best Practices of a Successful Certification Body

Learning from an NPO that has completed the requirements to become a certification body (CB) under the APO Accreditation Body (AB) will enhance the capability of the Productivity Certification Body of Pakistan (PCBP).

The VNPI and APO Secretariat organized an in-country BCN project on Benchmarking the Best Practices of a Successful Certification Body from Pakistan to Vietnam, 25–27 July, which was attended by three participants from the NPO, Pakistan. The sessions were facilitated by officials from multiple organizations such as STAMEQ, the Vietnam Standards and Quality Institute (VSQI), Vietnam Certification Center, VNPI, and ViProCB.

**Program coverage:** *The National Productivity and Quality Program of Vietnam (2021–30): Key activities and challenges, strategies, achievements, and collaborations; Productivity specialist development strategy; Developing national standards for productivity specialists, publishing national standards, providing certification, and related services; Enhancing cooperation and exchanging expertise on productivity solutions between STAMEQ and the NPO, Pakistan; and The Certification of Productivity Specialists (APO PS:101) scheme.*

## ii. Individual-country Observational Study Missions

### Best Practices in Public-sector Productivity

Since 2014, Türkiye's Ministry of Industry and Technology has annually implemented the Productivity Project Award (PPA) to promote awareness of and innovative solutions for productivity improvement,

mainly in the public sector. In the PPA 2021, the Istanbul Naval Shipyard, Kayseri Ulasim A.S., and Duzce Provincial Health Directorate achieved the top ranks for their initiatives in shipbuilding, public transportation, and healthcare, respectively. Inspired by Japan's renowned public-sector productivity performance, the awardees adopted valuable insights to enhance public service delivery in their areas and organizations by directly observing best practices.

An IOSM on Best Practices in Public-sector Productivity in Japan was hosted by the JPC in Tokyo, 10–13 July, to boost the achievements of the top three PPA 2021 awardees. Six members from Turkiye attended the mission and were introduced to productivity initiatives, tools, and digital transformation in Japan by two local resource persons. They visited shipbuilding, public transportation, and healthcare organizations to observe and exchange best practices and productivity efforts in these sectors. Moreover, the mission provided an opportunity for national PPA Committee members to consult with the APO Secretariat and related institutions to enhance the PPA.

**Program coverage:** History of the JPC and productivity movement; Productivity in Japan: From 5S and kaizen to the latest trends in digital transformation and the IoT; Example of robot development and demonstration; Digital transformation in the field of elderly care in Japan; Guide to and development history of Mikan Shimokita; Urban development along a railway line; Urban development through public-private collaboration; Guide to Minami-machida Granberry Park and its environmental initiatives; The Marin Future Stream initiative; and Digital and environmental initiatives (operation support system, remote-controlled vessels, decarbonization). Site visits were made to the APO Secretariat, JPC, Tokyo Metropolitan Industrial Technology (TIRI), Santa Fe Garden Hills, Japan Agency for Medical Research and Development (AMED), Mikan Shimokita of Keio Corporation, Minami-machida Granberry Park of Tokyu Corporation, and Mitsubishi Shipbuilding Co., Ltd.

### Green Productivity for Circular Economy Development

In recent years, Vietnam has taken significant steps toward sustainable green growth, actively contributing to addressing the global climate crisis. Initiatives like the National Green Growth Strategy for 2021–30 with a vision to 2050, National Strategy on Climate Change, and COP26 commitment to achieve net-zero emissions by 2050 highlight the country's dedication. Transitioning to a circular economy is now a pressing but challenging need. As the APO COE on GP and with more than 20 years of experience in the recycling industry and GP development, the ROC's success in green growth transition can provide essential lessons for Vietnam in achieving sustainable green development.

An IOSM on GP for Circular Economy Development was hosted by the CPC in Taipei, 28–30 August, to facilitate Vietnam's learning on GP promotion and training as well as solutions and support to enterprises. Six participants from the NPO and National Assembly Television of Vietnam joined the mission, held discussions with the CPC, and visited five companies with good practices in GP implementation and promotion. A best practice-sharing session was also conducted with a local resource person on the significance of energy efficiency in achieving net-zero emissions.

**Program coverage:** GP approaches in the ROC; COE on GP activities; Government support for GP programs in the ROC; Involvement of stakeholders in GP activities; GP solutions for enterprises; Case studies on how the CPC supports enterprises in adopting GP solutions; How energy efficiency leads the drive to a net-zero future; GP promotion through TV programs; Best practices in GP implementation and adoption; and GP promotion and initiatives. Site visits were made to DA.AI Technology Co., Ltd., Chungtai Resource Technology Corp. (specializing in industrial waste removal and treatment), O'right (a producer of green beauty and haircare products), Cheng Loong Corp. (a papermaker and converter), and Horng En Group (a plastic recycler).

### Industry 4.0 in SMEs

Fiji is one of the favored countries for manufacturers in the South Pacific due to its affordable utility costs. However, most manufacturers in Fiji still identify their operations at the Industry 2.0 stage due

to limited Industry 4.0 knowledge, while larger manufacturers, mainly multinational enterprises, have progressed to Industry 3.0. To kickstart Industry 4.0 implementation, Fiji plans to transition to Industry 3.0 first, utilizing the IoT to streamline manufacturing processes. This involves connecting CNC control operations and central control systems to analyze production line performance and prevent downtime.

An IOSM on Industry 4.0 in SMEs was hosted by the NPC in New Delhi, 24–28 July, to facilitate understanding of Industry 4.0, innovation, and digitalization in SMEs. Six members from Fiji attended, and two local resource persons from the APO COE on IT for Industry 4.0 led discussions on the topics. Five institutions hosted site visits to demonstrate best practices in the adoption of advanced manufacturing and Industry 4.0 technologies in SMEs as well as related training programs.

**Program coverage:** *Initiatives of the COE on IT for Industry 4.0; Trends in advanced manufacturing technologies; The changing paradigm of Industry 4.0 in the post-COVID-19 pandemic era; Adoption and implementation of advanced manufacturing and Industry 4.0 technologies by SMEs; Policies for smart manufacturing development in India; Identifying, developing, and deploying technologies in the agriculture/animal husbandry and textile/apparel manufacturing sectors; Startup India initiative and linkages with Industry 4.0 through incubation and industry-academia partnerships; Adoption of Industry 4.0 technologies in the food-processing industry; and Training in Industry 4.0 and innovation for MSMEs in India. Site visits were made to the Foundation for Smart Manufacturing, Indian Institute of Technology Delhi, Invest India, Startup India, Yakult Danone Plant, National e-Governance Division, and Training-cum-Incubation Centre of the National Small Industries Corporation.*

### Industrial Policies and Practices: Advancing the Industrial Economy in the Digital Age

Prompted by digitalization and post-COVID economic recovery, Thailand's government is pursuing the Thailand 4.0 policy, focusing on sustainability and growth, particularly in the industrial sector. To achieve this, the adoption of digital technologies and promotion of innovation are key strategies under various policies and initiatives. With a proven track record in implementing industrial and innovation policies such as the New Growth Strategy 4.0 and the Korean New Deal, along with its sixth-place ranking in the Global Innovation Index 2022, learning from the ROK is expected to help accelerate the achievement of Thailand's development goals.

An IOSM was hosted by the KPC in Seoul, 17–19 July, to facilitate Thailand's learning and idea exchanges on digitalization and innovation. Headed by APO Director for Thailand and Permanent Secretary, Ministry of Industry of Thailand, 10 mission participants met and held discussions with leaders of the Ministry of Trade, Industry and Energy of the ROK and KPC on digitalization and innovation and potential collaboration activities. They also observed 5G-based technologies and innovative solutions in the industrial, manufacturing, and urban development sectors. Two local experts shared insights on the best practices of digital transformation and innovation policies, innovation start-up ecosystems, and K-culture in the ROK.

**Program coverage:** *Best practices of digital innovation policy in the ROK; Major KPC activities (digital transformation and accreditation); Industrial technology innovation policy and major roles of the Korea Institute for Advancement of Technology (KIAT); The K-startup innovation ecosystem and government policy; and K-culture, the soft power of the ROK. Site visits were made to the KPC, SK Telecom T.um, Safeware Inc., Pangyo Technovalley, Incheon Free Trade Zone Smart City, and LG Science Park.*

### Environmental, Social, and Governance (ESG)

The ROC has committed to net-zero emissions by 2050, and enterprises are now prioritizing sustainable development and social responsibility, especially in the manufacturing and catering sectors, through the adoption of ESG principles. The KPC has made concrete progress in establishing a good ESG ecosystem including the publication of a national sustainable management index (DJSI Korea), ESG Infrastructure Expansion Plan, K-ESG Guidelines, etc. The ROK offers a good ESG promotion model for the ROC to benchmark against.

An IOSM on ESG was hosted by the KPC in Seoul, 12–14 September, to facilitate the ROC's learning on experiences in ESG implementation at enterprise level. Five participants from the CPC joined the mission, held discussions with the KPC, and visited four companies with good practices in ESG implementation. A sharing session on ESG implementation in the ROK, particularly in manufacturing and service enterprises, was also conducted with a local resource person.

**Program coverage:** ESG implementation in the ROK, focusing on manufacturing and services; Major KPC activities in ESG; Major CPC activities in ESG; and Best practices in ESG implementation and promotion the ROK. Site visits were made to the KPC; KC Cottrell Co. Ltd. (provider of air pollution control services); Purium Co., Ltd. (developer and manufacturer of walk-through air-purifying systems); Korea District Heating Corp.; and Douzone Bizon Co. Ltd. (ICT solution and service provider).

### Public-sector Productivity Development in the ROK

Driven by innovation and technology, the ROK's public-sector productivity has achieved remarkable progress. With a keen focus on digital transformation, the government has streamlined processes and improved service delivery. Investments in education and skill development have cultivated a highly competent workforce. Transparent, accountable governance ensures efficient resource management. The ROK offers a good model for APO members to benchmark against, showcasing the profound impact of technology adoption and human capital development on public-sector productivity.

An IOSM on Public-sector Productivity Development in the ROK was hosted by the KPC in Seoul, 24–27 October, to facilitate Turkiye's learning on best practices in promoting productivity in the public sector. Six participants from Turkiye joined the mission, held discussions with the KPC, and visited six institutions with good practices in public-sector productivity. A sharing session on digital innovation policies in the ROK was also conducted with a local resource person.

**Program coverage:** Digital innovation policies in the ROK; The KPC's major public-sector activities; Best practices of productivity improvement in the public sector; National science and technology innovation system; National development based on science and technology; Socioeconomic value creation through public R&D performance; Introduction to the Korea Online E-Procurement System (KONEPS); Best practices of productivity development, measurement, and improvement; Productivity development policies; Productivity education, training, and research programs; Smart city initiatives in Incheon; Developing plans and strategies for urban development incorporating smart technologies, efficient transportation, and sustainable infrastructure; Building a robust digital infrastructure; Technological innovation and R&D efforts among SMEs and startups; Consulting services and training programs to help SMEs and startups; Introduction to Seoul transport operation and information services (TOPIS); TOPIS 3.0: A city management hub; and Functions of TOPIS. Site visits were made to the KPC; Korea Institute of Science and Technology (KIST); Public Procurement Service (PPS); Korea Advanced Institute of Science and Technology (KAIST); Incheon Smart City Corporation (ISCC); Korea SMEs & Startup Agency (KOSME); and Seoul Metropolitan Government.

### The ROK's Research and Development Journey

Easing government regulations including R&D-related policies is crucial for Malaysia to stimulate business dynamism and foster productivity growth. The medium-term Twelfth Malaysia Plan (2021–25) to achieve “a Prosperous, Inclusive, Sustainable Malaysia” focuses on accelerating R&D, innovation, and investment in the target sectors of electronics, global services, aerospace, etc. Learning from the ROK could help Malaysia strengthen its R&D ecosystem, related technical cooperation, and competitiveness.

An IOSM on the ROK's R&D Journey was hosted by the KPC in Seoul, 12–15 December, to help Malaysia adopt best practices in strengthening R&D-related activities by government, academia, businesses, research institutions, and industries. Six participants from Malaysia interacted with two

local resource persons, held discussions with the KPC, and made site visits to nine institutions to observe good R&D policies and practices focusing on digital transformation and science and technology innovation.

**Program coverage:** *Science and technology innovation; R&D hub zones; Technology R&D projects, support, transfer, and consulting; and Convergence technology research. Site visits were hosted by the KPC, Korea Institute of Science and Technology, Ansan City Hall, Gyeonggi Technopark, Research Institute of Convergence Technology, Korea Institute of Industrial Technology, UNITECH R&D Center, POSCO Global R&D Center, Seoul Office of the National Information Society Agency, and SK Telecom Ubiquitous Museum.*

### Productivity Improvement through Good Regulatory Practice

Good regulatory practices (GRP) involve the systematic application of tools, institutions, and procedures that governments can utilize to ensure that regulatory outcomes are effective, transparent, inclusive, and sustained. Adopting GRP can improve the regulatory environment and produce better conditions for sustainable growth and investment. To achieve the vision of becoming a developed nation by 2045 and to enhance national labor productivity, GRP has been identified as a significant solution by the Vietnamese government. Learning experiences from other countries may help facilitate the adoption of GRP in Vietnam, allowing the replication of successful initiatives and avoidance of common mistakes.

Adopting GRP since 2010, Malaysia has achieved remarkable results, demonstrating more business-friendly regulations and a more favorable regulatory environment for economic growth and investment. An IOSM project on Productivity Improvement through GRP was hosted by the Malaysia Productivity Corporation (MPC), 20–22 June in Kuala Lumpur, to enable Vietnam to learn from Malaysia's experiences and initiatives. Six participants from Vietnam attended the mission, facilitated by two local resource persons. Mission members also visited a company under the Agro-Food Productivity Nexus initiative.

**Program coverage:** *Overview of Malaysia's productivity; Overview of the GRP framework in Malaysia; GRP: Governance, tools, and approach; Case studies on regulatory improvement; Key productivity drivers: Technology adoption and digitalization; and Discussion on future collaboration on GRP. A site visit was hosted by ABS Greentech Sdn. Bhd.*

### Productivity-linked Wage System (PLWS)

Productivity-linked wage systems (PLWS) are flexible and competitive, allocating profits created based on employers' and employees' performance as well as productivity to enhance shared prosperity and competitiveness. Implemented by the Malaysian government since 1996, the PLWS has been effective in improving national labor productivity and, importantly, bringing highly skilled Malaysians home from abroad to serve the country. Experience from Malaysia is important for other APO members looking into establishing or innovating PLWS.

An IOSM was hosted by the MPC in Kuala Lumpur, 2–4 August, to facilitate Bangladesh's understanding of PLWS. Six participants from the Ministry of Industries and NPO joined the mission, which was facilitated by two local resource persons.

**Program coverage:** *Overview of Malaysia's productivity initiatives; PLWS development in Malaysia; Overview of e-Shared Prosperity Organization (eSPO); and Case studies: Implementation of eSPO. Site visits were made to KPJ Rawang Specialist Hospital and SGS Malaysia Sdn. Bhd. to observe and discuss best practices of eSPO.*

### Best Practices of Fruit, Gems, and Jewelry Industries in Thailand

As an agricultural country with geographic and climatic diversity and abundant resources of precious and semiprecious stones, the fruit, gem, and jewelry industries are important contributors to Pakistan's GDP and employment. It is estimated that their contribution could be around 1–2% of GDP. However, their full potential remains untapped due to a lack of sophisticated technologies, leading to wastage and compromises in quality. Thailand, renowned for expertise in colored stone and silver jewelry exports, serves as an excellent benchmark for APO members to enhance productivity and quality in their fruit, gem, and jewelry industries.

Hosted by the FTPI in Bangkok, 3–7 July, an IOSM on Best Practices of Fruit, Gem, and Jewelry Industries provided Pakistan with the opportunity to learn about policies, processing and waste-reduction technologies, and best practices in these industries. The mission was attended by six members from Pakistan, headed by the Federal Minister for Industries and Production, and expected to foster collaboration and business exchanges between the two countries.

**Program coverage:** Sustainable development of dehydrated fruit and vegetables; Fruit dehydration technologies; Gem and jewelry cutting and polishing techniques; GP and best practices in the dehydrated fruit and vegetable and gem and jewelry industries; Training program; and Gem and jewelry exports. Site visits were made to Kuiburi Fruit Canning Co., Ltd.; Food Processing Industry Club, Federation of Thai Industries; Gem and Jewelry Institute of Thailand; and Pranda Jewelry Public Company Limited.

### Smart Factory Transformation

In response to Industry 4.0, Malaysia launched the Industry4WRD national policy on Industry 4.0 in 2018 to accelerate digital transformation in manufacturing and related service sectors, with the aim of becoming a hub for high-tech industries in the Asia-Pacific region. Although various supporting schemes have been provided by the government, Malaysia lagged behind the ROC in digital technology adoption. According to the IMD World Digital Competitiveness Ranking 2021, Malaysia ranked 27th, while the ROC secured the 8th position.

An IOSM on Smart Factory Transformation was hosted by the CPC in the face-to-face modality, 13–15 June in Taichung, to enable Malaysia to learn from the ROC's smart factory transformation policies and best practices as well as to foster business exchanges and networking on digital transformation and smart manufacturing. Thirty-seven participants joined the IOSM, including representatives from the MPC and manufacturing and service enterprises.

**Program coverage:** Visits to the CPC, Taichung Software Park Digiwin, computer numerical control manufacturing company Rui Chen, precision-casting company Shin-Yain Industrial, and the bicycle company Pacific Cycles. Discussions on policies and best practices in digital transformation and smart manufacturing as well as business and networking activities between participating and hosting companies were held.

### Innovation Management

By fostering fresh ideas, inventive solutions, and novel approaches, innovation transforms challenges into opportunities and pushes boundaries to create new frontiers. Continuous innovation is essential for organizations to ensure their competitiveness and sustainability, which often requires a well-established innovation management system. The 2015 Survey of Innovation Activities and 2021 Study on the Innovation Management Capacity of Selected Organizations in the Philippines revealed a lack of established innovation management among MSMEs, coupled with limited government support and involvement in innovation. This underscores the Philippines' need to benchmark against and adopt successful practices from elsewhere to enhance and promote innovation management.



An IOSM was hosted by the Small and Medium Enterprises Development Support Center 2 (SMEDEC 2)/Directorate for Standards, Metrology and Quality (STAMEQ) in Ho Chi Minh City, 7–11 August, to facilitate the Philippines' learning on experiences and best practices in innovation management. Eight participants from the Departments of Science and Technology of seven regions joined the mission, which was facilitated by two local resource persons.

**Program coverage:** Mechanisms, policies, and measures on science, technology, and innovation in Vietnam; Introduction and observational tour of QUATEST 3; Innovation activities in Vietnam; and Enterprise culture and innovation. Site visits were made to nine institutions including Quality Assurance and Testing Center 3 (QUATEST 3), Saigon Hi-Tech Park (SHTP) Training Center, Ho Chi Minh City Department of Science and Technology, Saigon Innovation Hub, VNU-HCM Innovative Entrepreneurship Center, Small and Medium Enterprises Development Support Center 2 (SMEDEC 2), Thinksmart Ltd., CNS Amura Precision Co., Ltd., and Standard Units Supply Vietnam Company Limited.

### iii. Certification Body Development

#### Certification Body Development (CBD) Program

The CBD Program expands the role of NPOs by developing them to become APO CBs and operate productivity specialists' certification schemes. The program guides NPOs or their affiliates in complying with the requirements and standards of the APO-AB through consultancy and training by experienced resource persons on the scope of accreditation, certification process, competency of staff, and management structure. It ensures that participating NPOs or their affiliates are able to meet the requirements before accreditation by the APO-AB. The CBD Program guides NPOs in complying with the prescribed requirements and standards of practice set by the APO-AB through consultancy and training by experienced resource persons on the scope of accreditation, certification process, competency of staff, and management structure.

In 2023, the NPOs of Bangladesh, Singapore, Sri Lanka, Thailand, and the Turkish Management Sciences Institute (TUSSIDE), an affiliated organization of the NPO of Turkiye, continued their efforts in various stages of development to become APO CBs. Earlier, the CBD Program assisted the NPOs of India, Indonesia, Malaysia, Mongolia, Pakistan, and Vietnam in the successful development of their CBs for productivity specialist-related certification schemes. Moreover, the CB of I.R. Iran was developed with technical support from the MPC.

### iv. Specific National Program

#### Development of the Monitoring and Evaluation Framework of the National Productivity Master Plan for Bangladesh

The Bangladesh National Productivity Master Plan (FY2021–2030) was finalized in July 2019 with government endorsement of the embedded targets, strategies, directions, and initiatives. Given that the master plan is a collaborative effort encompassing diverse ministries, agencies, and private entities, it is imperative to devise a robust methodology for evaluating the progress of its implementation.

The establishment of a monitoring and evaluation (M&E) system will facilitate a comprehensive assessment of the master plan's implementation, extending to the broader monitoring of national productivity levels. This procedural framework, coupled with an associated evaluation framework, will prove instrumental in shaping activities and guiding directions that foster productivity advances in Bangladesh. The introduction of an M&E framework is anticipated to enhance the efficiency of executing initiatives outlined in the master plan.

A policy consultancy project started in July 2023 with the objective of evaluating sectoral and national

productivity levels in Bangladesh in accordance with the objectives outlined in the National Productivity Master Plan. It also identifies methodologies to achieve the goals established in the productivity master plan and formulate a comprehensive M&E framework for the NPO of Bangladesh. This framework aims to assess and gauge productivity performance effectively. A team of policy evaluation experts from Australia facilitated the project, which will be completed in May 2024.

### Development of the National Productivity Master Plan for Sri Lanka

Productivity in Sri Lanka has exhibited noteworthy dynamism, particularly in nonfarm sectors like tourism and services, leading to robust labor income growth over the past decade. However, the COVID-19 pandemic dealt a significant blow, resulting in economic contraction and an upsurge in poverty. The decreased labor productivity in Sri Lanka is ascribed to skill deficiencies, inadequate training, limited technology adoption, and suboptimal work practices. Agriculture faces challenges stemming from outdated farming techniques, limited technology access, and susceptibility to the impact of climate change, all of which contribute to a decrease in productivity. Within manufacturing, productivity levels vary among subsectors. Some have successfully integrated modern technology and streamlined processes, while others grapple with issues like outdated machinery, limited innovation, and low value addition. The service sector, while showing promise in terms of productivity growth, still requires enhancements in service quality, efficiency, and skill development.

To support the NPS in formulating a comprehensive National Productivity Master Plan, a project commenced in October 2023 for completion in May 2024. It aims to serve as a guiding framework for the national productivity movement and development of a productivity growth strategy. The strategy will integrate productivity into the economic development agenda, establishing mid- to long-term goals and targets. This process involves the delineation of strategic initiatives and measures to facilitate sustainable productivity enhancement. A consultation team from the KDI is facilitating the project.

### Development of Innovation Management Policy Framework for MSMEs in the Philippines

Prominent challenges in the realms of R&D, technology, and innovation are characterized by limited stakeholder collaboration and a deficient emphasis on market information. To address these issues, the Department of Science and Technology (DOST) of the Philippines recently launched the Regional Inclusive Innovation Program. This initiative is designed to cultivate collaboration among stakeholders and propel market-oriented R&D, thereby enhancing competitiveness, with a specific focus on MSMEs.

Various studies recommended the expansion of the Innovation Management System (IMS) survey conducted by DOST to comprehensively map the evolving needs and requirements of MSMEs. This is aligned with current endeavors to elevate MSMEs into intelligent enterprises, guided by strategic themes such as the sustainable economy, market competence, human capital, and resilience and continuity. There is also a need to formulate an innovation management policy framework and provide recommendations tailored for MSMEs. These recommendations should be aligned with adjustments in DOST's organizational policies, forming an integral part of the broader initiative to stimulate wealth creation through the establishment of a dynamic, intelligent MSME ecosystem.

A project started in November 2023 to examine the effectiveness of the IMS in the Philippines and critically assess DOST's innovation assistance program for MSMEs. It also identifies areas for improvement in innovation management capacities and determine specific assistance that DOST could offer to enhance them. Additionally, it will formulate an innovation management policy framework and provide recommendations to integrate IMS within MSMEs, contributing to overall innovation in the sector. An expert on national innovation management from India is conducting the project, which is expected to be completed in March 2024.

## Institutional Capacity Development Plan for the Vietnam National Productivity Institute: Phase 2

Formulating plans and policies for national productivity movements and implementing them to support the achievement of socioeconomic development goals are among the key responsibilities of NPOs. As the NPO of Vietnam, the VNPI is expected to reposition itself to meet evolving challenges in enhancing productivity and business performance for sustainable socioeconomic development. Vietnam is facing challenges due to declining labor productivity and overall low productivity performance relative to other economies in the region.

To assist the VNPI in overcoming those challenges, the APO initiated a project to develop an institutional capacity development plan comprising recommendations on strategies, organizational structure, infrastructure, funding models, staffing, governance, leadership, human resources, services and programs, operations, and systems. The first phase of the project was completed in 2022, with recommendations on those elements. The plan also recommended new focus areas for the VNPI to cope with evolving challenges. The second phase of the project was the dissemination of the recommendations to all stakeholders. The dissemination also accommodated refinements to the plan. Key policymakers in relevant units or agencies were first targeted so that high-level buy-in could be ensured.

National and regional dissemination events were organized in conjunction with the handing over of the recommendations to the Prime Minister of Vietnam in April 2023. High-level strategic directions were also received from the Prime Minister as follow-up initiatives to support the overall government strategy to enhance labor productivity. Two resource persons from Malaysia and Singapore facilitated the dissemination activities and consultations and were also involved in high-level meetings.

## 1. Technical Expert Services

### Basic Productivity Tools and Techniques for Bangladesh

Capacity building, particularly productivity knowledge enhancement, is vital for any organization to maintain and improve overall functioning and efficiency. The understanding and application of productivity concepts, tools, and techniques can not only help optimize the utilization of resources but also increase the quality of services and products as well as develop a good organizational culture. This is significant when all resources are becoming scarcer while competition among businesses is increasing.

A TES project on Basic Productivity Tools and Techniques for Bangladesh was organized by the NPO, Bangladesh, and APO Secretariat, 29 December 2022–2 January, to enhance productivity knowledge for the employees of Aftab Feed Products Ltd. (AFPL), one of the leading producers and marketers of livestock feed products in the country. Forty-six officials from AFPL and four NPO Bangladesh personnel took part in the training course, guided by a resource person from Singapore, who shared knowledge through practical case studies on basic productivity concepts, principles, tools, and techniques. The participants were also provided with an opportunity to develop their own productivity schemes to improve efficiency in operations, production, and management processes in AFPL with the assistance of the resource person.

**Program coverage:** *Productivity concepts and principles; Productivity measurement; Kaizen and the PDCA cycle; Problem-solving tools and techniques; 5S housekeeping; Lean management; Basic industrial engineering; Total quality management; Quality circles; and Suggestion schemes.*

### Occupational Health and Safety Management Systems (OHSMS) ISO 45001 Lead Implementer in Heavy Industry

ISO 45001 is an international standard that specifies requirements for the Occupational Health and Safety Management System (OHSMS) with guidance for its use to enable organizations to proactively improve performance in preventing injury and illness in the workplace. All requirements are intended to be integrated into an organization's own management processes. Beyond protecting employees, this can lead to better workforce morale, improved products or services, and stable revenue flows. For companies including heavy industry in Mongolia, the OHSMS is a significant factor in safe, effective business operations.

A digital In-country TES project on the Occupational Health and Safety Management System (OHSMS): ISO 45001 for Lead Implementers in Heavy Industry for Mongolia was held 21–24 and 27–30 March. It aimed to develop the necessary expertise to support companies and organizations in establishing, implementing, managing, and maintaining OHSMS based on ISO 45001 for heavy industry. Twenty MPO experts as well as engineers and managers from the private sector attended the training and gained in-depth knowledge of auditing occupational safety based on ISO 45001 and on administering a team of auditors following widely accepted audit procedures, principles, and techniques.

**Program coverage:** *Introduction to ISO 45001 and initiation of OHSMS implementation; Initiation of OHSMS implementation; Leadership and worker participation; Hazard identification and assessment of risks and opportunities; Awareness and communication; Emergency preparedness and response measures; Internal audit; and Continual improvement.*

### Design, Development, and Implementation of a Competency Framework for Regulators

Regulations are set to control a broad range of risks that may lead to economic, health, infrastructure, security, and environmental problems. A critical factor in reducing those risks is how regulators design, implement, monitor, and evaluate regulations. Day-to-day regulatory activities determine the success or failure of regulations. In the Philippines, while competency frameworks for professionals in the private sector have long been studied, few structures that set and define each competency required for public-sector regulators are in place, creating barriers to both regulatory implementation and development of an efficient workforce. It is thus important to develop a minimum competency framework for regulators including the required knowledge, abilities, and skills to make meaningful contributions to improve the productivity of citizens, businesses, and the government.

A TES project on Design, Development, and Implementation of a Competency Framework for Regulators was organized by the DAP in the Philippines, 27–31 March, to enhance the skills and knowledge of selected DAP personnel in designing, developing, and implementing future projects on a competency framework for regulators and developing an initial work program. Twenty DAP officials participated in the sessions.

**Program coverage:** *Designing a competency framework; Developing a competency framework; Design and development of a behavioral competency framework; Design and development of a technical competency framework; and Implementation and assessment of competency frameworks.*

### Capacity Building on Export Compliance for Electrical Equipment Sector

Compliance with international and national standards promotes enterprise efficiency and competitiveness through international trade; protects consumers' rights, health, and safety; and leads to socioeconomic development. Noncompliance with these requirements often results in loss of business.

An online TES project on Capacity Building on Export Compliance for the Electrical Equipment Sector was held 3–7 April to assist electrical equipment manufacturers in Pakistan in complying with

international market requirements by increasing product quality and enhancing quality management to internationalize commerce and trade, receive product certification, and form linkages between standardization and legislation. Forty-four participants from the Industries, Commerce, Investment & Skill Development Department of the Urban Unit, Gujranwala, Sialkot, and Lahore Chambers of Commerce, and three different universities attended the sessions. Two resource persons from the Turkish Standards Institution (TSE) delivered interactive sessions. The aims were to establish a conformity evaluation and certification framework; improve local, regional, and international business competitiveness; create awareness of globally recognized certification systems; and establish linkages among R&D organizations, academia, and industrial sectors.

**Program coverage:** *Standard organizations in the electromechanical sector; Information on laboratory accreditation; Tests and equipment according to EN 60335-1, EN 60335-2-7, EN 60335-2-31, EN 60335-2-80, EN 55014-1, EN 55014-2, EN 61000-3-2, and EN 61000-3-3; Materials and equipment according to EN 60456; and Energy tests of washing machines and calculations.*

### Promotion of Green and Circular Economy in Turkish Free Zones

Turkish free zones have played a vital role in sustainable development by encouraging export-oriented investment and production, accelerating FDI and technology transfers, and developing international trade. Currently, in 18 free zones, there are more than 1,900 companies with total trade volume of nearly USD25 billion, which provide 85,248 jobs. Transforming existing free zones into more efficient structures would reduce the negative environmental impacts of their production activities and provide competitive advantages for the companies operating in them via lowered production costs.

An online in-country TES project on Promotion of a Green and Circular Economy in Turkish Free Zones was implemented from 16 to 18 May. One hundred participants from the Turkish Ministry of Trade, Directorate General of Free Zones, Free Zone Directorates, companies, and company associations attended. An APO resource person from the ROK and two local resource persons assigned by the NPO Türkiye delivered presentations and led discussion sessions.

**Program coverage:** *Green buildings; Renewable energy, resource cycling, and symbolic production with special focus on free zones; Learning from other members' experiences; Türkiye's Organized Industrial Zones (OIZ) Project; Ecoindustrial parks (EIPs) and global trends; The Korean EIP Program; and International cooperation in EIPs.*

### International Conference on Smart Agriculture

An international conference on Smart Agriculture was organized by the Ministry of Agriculture of the ROC and CPC, with support from the APO, 31 October–1 November in Taipei in a hybrid format. The conference brought together local and international experts to discuss the latest trends and developments in smart agriculture, a field that integrates advanced technologies such as the IoT, cloud computing, and big data to optimize agricultural production and management. In addition, it promoted the sharing of agricultural insights, reinforcing the ROC's smart agricultural network and amplifying the benefits for local small-scale farmers.

The conference featured three main sessions, covering topics such as global food security challenges and smart agriculture technology solutions, supporting strategies for agricultural smart transformation and case studies, and exploring overseas export models for smart agriculture technology services. It was also a platform for attendees to gain insights into cutting-edge technologies and global agricultural resources, fostering an enhanced understanding of smart agricultural practices. The two-day event attracted 150 participants, including government employees, researchers, agribusiness-related personnel, and smart agriculture technology service providers. Two APO international resource persons from Japan and the USA attended, in addition to five local resource persons. As part of conference activities, virtual site visits for coaching and consultation were facilitated by the resource person from Japan.

**Program coverage:** *Japan's agricultural transformation; Innovations in aquaculture: The role of the IoT and expanding into new southbound markets; Taiwan's smart greenhouse innovations and global expansion; Prospects for expanding Taiwan's smart agriculture services overseas; and Enterprise onsite consultation.*

### Sustainable and Innovative Beekeeping

The global market value of bee products such as honey, pollen, propolis, etc. has important economic potential. Honeybees are vital for sustainable agriculture, biodiversity in many ecosystems, and nutritional security. However, recent studies have indicated that native bee populations are declining due to climate change, habitat loss, invasive species, parasites and diseases, and the use of pesticides. The major decline of honeybee health puts agriculture, healthy lifestyles, and worldwide food security at risk.

Bilateral cooperation is needed to cope with the recent increased bee mortality rate. Collaboration between beekeepers' organizations and government agencies is essential to bridge the gap between basic and applied science for improving bee health and the quality of honeybee products. Therefore, a face-to-face TES project on Sustainable and Innovative Beekeeping was implemented 20–25 February to share beekeeping experiences (theoretical and practical) and disease prevention and treatment strategies in Vietnam. The project was attended by 17 participants and conducted by an expert from Turkiye.

**Program coverage:** *Beekeeping worldwide and in Turkiye; Bee diseases, pests, treatments, and prevention; Apitherapy; Innovations in bee products; Apitourism; Innovations in beekeeping: Drug design for beekeeping; Virtual reality in beekeeping; Robotic systems in beekeeping; Hive tracking systems; Innovations in residue detection in bee products; Effects of climate change on beekeeping; How to save bees from climate change; and Toxicological studies in bees. A site visit was hosted by the Research Center for Tropical Bees and Beekeeping (RCTB) to observe bee-farming and other facilities and bee collection from hives.*

### Industry 4.0

Through the integration of cutting-edge technologies like AI, the IoT, robotics, cyberphysical systems, and cloud computing, Industry 4.0 is reshaping manufacturing, elevating efficiency, productivity, and profits. The Government of Bangladesh has taken several initiatives to promote Industry 4.0, including the establishment of the Bangladesh Hi-Tech Park Authority and Bangladesh Association of Software and Information Services (BASIS) as well as the launch of the Digital Bangladesh Program and the E-government Master Plan, although the development of Industry 4.0 still faces challenges, notably limited knowledge and awareness.

A face-to-face in-country TES project on Training on Industry 4.0 was organized by the NPO, Bangladesh, and APO, 19–23 November, to support Industry 4.0 learning. Twenty-five participants from various departments of the NPO attended. The sessions were facilitated by two resource persons from India who shared comprehensive insights into important components of Industry 4.0, with case studies and success stories from India and around the world.

**Program coverage:** *Overview of Industry 4.0; Key technologies of Industry 4.0; Acquiring data for smart manufacturing; Data analytics and predictive maintenance; Cybersecurity in Industry 4.0; Smart manufacturing and supply chains; Sustainable manufacturing and green technologies; Change management and skill development; Future trends and emerging technologies; Industry 4.0 roadmap development; and Case studies and success stories.*

### Productivity Measurement

Productivity measurement provides valuable information on how an organization is performing,



where it would like to be, and how it can achieve its goals.

The NTPC, Fiji National University, and APO Secretariat organized an in-country TES project on Productivity Measurement for Fiji, 3–7 July, which was attended by 91 participants from the public and private sectors. The sessions were facilitated by a resource person from Singapore.

**Program coverage:** *Productivity concepts and principles and overview of productivity measurement; Productivity, quality, and performance measurement tools and operational indicators; Service process and performance improvement; Productivity measurement case study and presentations by groups; The Fiji Business Excellence Awards (FBEA) framework and other models and methodologies; FBEA criteria framework and code of conduct for evaluators; and FBEA criteria assessment exercise.*

### Lean Six Sigma Green Belt

The NTPC, Fiji National University, has been leading productivity and quality efforts as the NPO of Fiji. For further efforts, it needs a larger pool of professionals within organizations who are trained at an international level. The Lean Six Sigma Green Belt is one of the ways to eliminate waste in organizations. Training of individuals in its applications could contribute to improvement of productivity and quality in workplaces.

A TES project on Lean Six Sigma Green Belt for Fiji was implemented 4–8 September. Twenty-nine participants from the public and private sectors completed the program. One resource person from India gave lectures and facilitated the sessions.

**Program coverage:** *Six Sigma fundamentals and statistics; Planning and implementing Six Sigma Green Belt projects; Measurement system analysis and hypothesis testing; Process modeling and design of experiments; Statistical process control; and Advanced Six Sigma tools and techniques.*

### High-performance Culture in Public Sector

A high-performance culture is a work environment that values and fosters excellence, innovation, and continuous improvement and where employees are encouraged and empowered to perform at their best and held accountable for their results. Creating and maintaining a high-performance culture are essential to increase productivity, competitive advantage, and adaptability to change in a dynamic environment. However, organizations may face obstacles in this, including resistance to change, lack of leadership support, poor communication, and lack of accountability.

A face-to-face in-country TES project on High-performance Culture in the Public Sector was implemented from 16 to 19 May in Jakarta, Indonesia. Two hundred participants from the AMS, ASEC, and the Indonesian government attended. An onsite resource person from India and two from France who attended virtually delivered presentations and led discussion sessions.

**Program coverage:** *Performance management systems; Performance information systems; Performance culture; Change management, organizational value, leadership, and innovation in performance management; Communication and performance dialogue; Managing performance through big data analytics; Data-driven decision-making; Skill- and knowledge-based productivity; and Sustaining public-sector productivity.*

### Communities of Excellence

“Communities of excellence (COE)” has become a movement in the USA. It is based on the Malcolm Baldrige National Quality Award Framework as a solution for difficult problems and is therefore relevant for Japan as it attempts to solve current challenges.

The JPC and APO Secretariat organized an in-country TES project on Communities of Excellence

for Japan, 19–23 September, which was attended by 208 participants from the public and private sectors. Two resource persons from the USA gave presentations at two conferences, one in Tokyo and one in Kumamoto, and joined discussions with local governments and communities. Stephanie Norling’s presentation introduced specific COE contents and practical examples such as in the San Diego area and Toledo, Ohio. In addition, Craig A. Anderson provided the background to the application of management methods of private organizations to communities in his presentation.

**Program coverage:** *Discussion with the Japanese Communities of Excellence (J-COE) Team of the JPC; 2nd Symposium on Productivity in 2023 on COE; Courtesy call on the APO Secretary-General and meeting with APO Secretariat staff; Courtesy call on Kumamoto City Mayor; Meeting with Higo Bank; International Conference in Kumamoto on COE; and Meeting with the Shizuoka community.*

### Training of Consultants and Trainers on HACCP and Food Safety Management Systems

The food-processing industry in Cambodia has experienced robust growth in recent years, driven by economic development, urbanization, and increased export opportunities. This growth has resulted in a higher demand for diverse food products, including processed foods. However, the industry is also facing many challenges impeding its ability to compete with imported products or export to international markets including the lack of in-country technical expertise and local infrastructure, shortage of skilled labor, and limited knowledge of food science, food safety, and hygiene protocols. Hence, increasing food safety knowledge is crucial for Cambodia to enhance consumer trust, access international markets, and protect public health.

A face-to-face in-country TES project on Training of Consultants and Trainers on HACCP and Food Safety Management Systems (FSMS) was organized by the NPCC and APO, 11–22 September. The primary objectives were to increase awareness and develop consultants and trainers on food safety as well as to promote the adoption of good practices and culture. The program attracted 46 attendees from the Ministry of Industry, Science, Technology & Innovation, related institutes and universities, and food and beverage enterprises in Phnom Penh. The sessions were facilitated by one international expert from Malaysia with a combination of lectures, group exercises, and practical work visits to two food and beverage SMEs and two APO demonstration companies on food safety.

**Program coverage:** *Introduction to the APO and its programs; Approaches to managing food safety; Applicable food safety statutory and regulatory requirements and standards for Cambodia; Interested parties and concerns related to food safety and FSMS; Group exercise on requirements and concerns of interested parties; Leadership and commitment in food safety management; Good practices in food safety/prerequisite programs and implementation; Hazard control and implementation; and Group exercises on FSMS. Site visits and work visits were made to Yang Li Yi Tofu, F.N.I.C Co. Ltd., EUROTECH Import Export Co. Ltd., and Leang Leng Enterprise.*

### System-based Incubation Programs

Cambodia’s startup landscape has seen rapid growth in recent years due to an increasing focus of the government on entrepreneurship and innovation. The young, dynamic population, combined with a rising interest in technology, has paved the way for a growing startup ecosystem. In 2022, the Startup Cambodia Ecosystem comprised 98 startups, supported by a network of mentors, investors, academic institutions, government bodies, and co-working spaces. However, these startups face many challenges, notably the lack of mentors tailored to their specific business needs. There is a need for enhanced incubation programs to propel these startups toward sustained success.

A face-to-face in-country TES project on System-based Incubation Programs was organized by the NPCC and APO Secretariat, 13–17 November, to support Cambodia’s incubation program. The project had 35 attendees from the Ministry of Industry, Science, Technology & Innovation, Cambodian startup centers, SMEs, and startup companies in Phnom Penh. The sessions were facilitated by two resource persons from Mongolia who shared insights and experience in successful incubation

through innovation, systemized approaches, and applications of systems engineering principles.

**Program coverage:** *Identifying goals, obstacles, and deficiencies in the innovation system of Cambodia; Social system engineering approaches and applications; Preventing startup failures through system engineering solutions; Hands-on learning on building an algorithm on a TUS D platform; Identifying organizational-level ecosystems: Innovation development reference model; National innovation ecosystem reference model; Assessment of Cambodia's science, technology, and innovation roadmap 2023 using a system model; and Establishing Cambodia's national innovation ecosystem framework.*

### Training of Trainers on Food Safety Management for Sri Lanka

Sri Lanka's food value chains capitalize on its diverse ecological regions and abundant biodiversity, allowing for the cultivation of a broad spectrum of nutritious crops, including fruit, vegetables, cereals, and rice. The current rise in health concerns and expanding export markets to countries with stringent food safety standards like the USA, EU, Middle East, etc. have underscored the necessity for Sri Lanka to enhance its food safety awareness and management capabilities.

A face-to-face in-country TES project on Training of Trainers on Food Safety Management for Sri Lanka was organized by the NPS and APO Secretariat, 21–25 August. The primary objectives were to enhance participants' understanding of food safety management and to cultivate trainers in this field. The 48 attendees included representatives from the Ministry of Agriculture, Ministry of Health, Industrial Technology Institute, NPS, certification bodies, SMEs, and various food-related industries, along with university students from the Faculty of Food Science & Technology. The sessions were facilitated by one international expert from Malaysia and two local experts from Sri Lanka, providing comprehensive knowledge and practical exercises on food safety, FSMS, and international and national food safety standards.

**Program coverage:** *Food value chains; Applicable food safety statutory and regulatory requirements and standards for Sri Lanka; Interested parties and concerns related to food safety and FSMS; Food standards/schemes in the global market; Sri Lanka's national standards related to food safety; Advanced FSMS; Risk-based thinking in FSMS and group exercise on risk analysis assessment; Good practices in food safety/prerequisite programs and implementation; Hazard control and implementation; Status of food-sector SMEs in Sri Lanka; FSMS implementation in SMEs: Challenges and proposed solutions; Best practices in FSMS: An APO success story; Group exercise on key actions in implementing FSMS for SMEs; and Key application areas of digitalization for FSMS.*

### Innovative Beekeeping Practices for Sustainable Apiculture

Beekeeping in Nepal is still under development. Due to climatic suitability and being a profitable business, many farmers from different regions start beekeeping with small-scale investments. However, apart from honey, other bee products such as propolis, royal jelly, and bee venom are not well known among Nepalese beekeepers. The lack of an experienced workforce and infrastructure required for beekeeping in Nepal poses additional barriers. There is a need to investigate hive products, harvesting and processing techniques, appropriate beekeeping management, disease and pest control, and low-cost honey production technology.

A face-to-face in-country TES project on Innovative Beekeeping Practices for Sustainable Apiculture was organized by the NPEDC, Faculty of Agriculture of the Agricultural and Forestry University, Chitwan, and APO Secretariat, 25–29 September. The primary objectives were sharing innovative, sustainable beekeeping knowledge and practices with Nepalese beekeepers. The improvement of technology (AI, IoT, and blockchains) in apiculture, such as for bee health, analysis, and management of the quality of honeybee products, genetics, and bee breeding, were the focus areas. The program was attended by 60 participants from faculties of agriculture and veterinary medicine as well as the Beekeeping Research Institute in Chitwan. The sessions were facilitated by one international expert from Türkiye with a combination of lectures, group exercises, and explanations of practical implementation.

**Program coverage:** Meeting with NPO representatives and government officers/technicians for consultation on joint projects; Beekeeping worldwide and in Turkiye; Bee diseases, pests, treatments, and prevention; Apitherapy; Effects of climate change on beekeeping; Apitourism; Innovations in beekeeping: Drug design for beekeeping; Virtual reality, robotic, and hive-tracking systems in beekeeping; Innovations in residue detection in bee products; Pharmacological and toxicological practical studies in bees; and Visits to apiaries and beekeepers to observe bee farming and practical implementation.

### Public-sector Value Chains for the Philippines

The challenges of the public sector in the Philippines today are multifaceted. For example, most public-sector organizations continue to work in silos, thus limiting the productivity of their interventions. Given this limitation, it is crucial to change the way public-sector organizations operate to provide value to the public through an improved public service value chain (PSVC).

A hybrid in-country TES project on PSVCs for the Philippines was implemented 23–27 October face-to-face and 1 December online. Thirty-five participants from the DAP and Department of Interior and Local Government completed the program. The project provided participants with a foundation on the PSVC in aligning information systems and service delivery of public-sector organizations. Two resource persons from Brazil facilitated the sessions and provided feedback to participants on development of a manual and postproject plans.

**Program coverage:** Understanding business process management and the value chain; PSVC development method (top-down approach); PSVC development method (bottom-up approach); Trust and confidence in public institutions and horizontal governance; Monitoring and evaluating value chains; Software tools to design and share value chains; Planning and starting the development of a manual; Presentation of the group plan and final conclusions; and Development of the manual.

### Blue Ocean Strategy and Leadership for the Philippines

The Capability Building on Innovative Leadership for Legislative Staff (CBILLS) Program, which has been implemented by the Center for Governance (CFG) of the DAP since 2018, has the primary objective of strengthening the civil service within the legislative branch. It achieves this by providing interventions to enhance the leadership, management, and technical skills of senior executives, managers, and technical legislative staff of the Philippine Congress. In 2023, the emphasis was on the role of Congress in balancing the powers of government and enacting legislative measures that are innovative, relevant, and assist the economy's return to the high-growth path outlined in the Philippine Development Plan 2023–2028.

A TES project on the Blue Ocean Strategy and Leadership (BOSL) was implemented 3–7 July as part of the CBILLS program. Nineteen participants from the Philippine Senate and House of Representatives completed the program. Two resource persons from Kazakhstan and Sri Lanka facilitated the sessions and provided feedback to participants on their postproject plans. This was part of the regular CBILLS program of the DAP.

**Program coverage:** Fundamentals of the BOS; Shift to a BOS perspective by highlighting successes in the public and private sectors through case studies; Six principles of the BOS and six paths to formulating an effective BOS for the public sector; Tools to formulate a BOS for the public sector; and Possible barriers and challenges in executing and communicating the BOS in the public sector.

### Dynamic Leadership and Human Resource Management

The APO offered support to the Civil Service Commission of the Philippines in the organization of the 10th Public Sector Human Resource (HR) Symposium, 26–29 September. The symposium aimed to update leaders and HR practitioners in the public and private sectors on emerging trends and best practices in the field of leadership, human resources management, and organizational development.

The theme of this year's symposium was Developing and Fostering a Culture of Dynamism to Achieve a Resilient and Sustainable People and Public Sector Organization. The symposium featured nine plenary sessions focusing on understanding and fostering dynamism in the workplace at personal, organizational, and societal levels. An APO international resource person from Japan was invited to share global concepts, principles, and practices of dynamic leadership and HR, while local HR leaders, experts, and practitioners showcased their agencies' best practices.

The symposium was one of the main highlights of the 123rd Philippine Civil Service Anniversary (PCSA) celebration, which was aligned with the aspirations and goals for a Philippines that enjoys a stable, comfortable life, protected and enabled by a clean, efficient, fair government. The symposium attracted more than 6,500 participants, both onsite and online, from various government agencies, private-sector organizations, and ASEAN members. An APO resource person also conducted a consultation session on dynamic leadership for the DAP.

**Program coverage:** *Dynamic leadership; Public service value and dynamism; A new wave of dynamic wellness; Organizational dynamism: Unleashing power in the workforce and positive team dynamics; and Strategic management for high-performing local government.*

### Development of 5S Lead Auditors

The NPO of Pakistan has provided 5S training, consultancy, and auditing services to industry for the last two decades. Since some senior members of the 5S team were transferred for further career progression, the NPO of Pakistan is in a transition phase and developing a new pool of 5S experts and auditors. Therefore, a TES project was designed to create a platform for their training and multiplier effects as the participants will also become productivity specialists.

The online TES project on Development of 5S Lead Auditors training followed by two awareness sessions for schools and industry was implemented 26–28 June and 11–14 July by the NPO of Pakistan. Twenty-five participants comprising the general manager, deputy and assistant managers, and management associates from the NPO joined the virtual training and awareness-raising sessions for industry and schools conducted by two resource persons from the Philippines and Singapore. The project aimed to develop a pool of 5S lead auditors to undertake inhouse 5S audits in their own organizations and as external 5S lead auditors in client organizations.

**Program coverage:** *5S Lead Auditor Training: Concept of lean management and 5S; The five pillars of 5S and their applications; Competencies of 5S auditors; 5S audit process; 5S checklist; Documenting and analyzing 5S observations from mock 5S audits by participants; Group presentations by participants; Awareness sessions for schools and industry: Strengthening the foundation of productivity and school excellence through the 5S philosophy; and Adopting and implementing the 5S philosophy.*

### Training on TQA Assessor Calibration

One of the strategies for productivity improvement in Thailand's 9th Social and Economic Development Plan is the creation of the Thailand Quality Award (TQA), which is administered by the FTPI and supported by governmental and private organizations. The Office of the Thailand Quality Award (OTQA) organizes annual training sessions to develop TQA assessors.

A TES project on TQA Assessor Calibration Training was implemented 12–17 June (online) and 23–27 June 2023 (face-to-face) in Bangkok by the FTPI. A total of 229 participants joined the Experienced Assessor Calibration training, and 59 joined the Business Excellence Framework seminar conducted by APO Resources Person Paul Grizzell, President of Core Values Partners, Inc., USA, and Master Examiner of the Malcolm Baldrige National Quality Award (MBNQA) which aimed to calibrate TQA assessors on MBNQA criteria and assessment standards and provide knowledge on the Business Excellence Framework for organizations interested in applying for the TQA.

**Program coverage:** *Mockup case study; Calibration of assessment standards; Planning workshop with the TQA Technical Subcommittee; Designing a full model scorebook; Analysis and comparison of prework assessment to calibrate scoring standard and assessment quality; Classroom training and workshops with the TQA Technical Subcommittee, team leader, and experienced and new assessors; and Seminar on the Business Excellence Framework.*

### Increasing Efficiency of Provincial Disaster Management

The two earthquakes with magnitudes of 7.7 and 7.6 in Türkiye on 6 February 2023 caused over 55,000 deaths, with nearly 130,000 injured in 10 provinces. Millions were displaced from their homes. Governors from other cities assisted in coordinated evacuations, accommodations, debris removal, and transportation. To address the challenges faced before and after the disaster in terms of coordination at provincial level, a TES project was implemented to emulate the best practices of Japan as a role model in the field of disaster prevention and management.

The online TES project on Increasing Efficiency of Provincial Disaster Management was implemented 24–28 July by the Denizli Governorship in Türkiye. Three hundred and thirty participants from 97 central local and government organizations joined the face-to-face conference, training, site visits, and case study sessions conducted by five resource persons, two from Kansai University and the Asian Disaster Reduction Center in Japan, and three from Türkiye. The project transferred technical expertise and experience from Japan in coordinating responses to earthquakes.

**Program coverage:** *Disaster management in Japan; Local earthquake disaster plan in Denizli; Hazard map and scenarios in tourist areas; and Disaster prevention and management technologies in Japan. Field visits were conducted to disaster coordination centers, the Laodicea ancient city faultline, and metropolitan municipalities.*

### Improvement of Public-Sector Efficiency using Blockchain-based Database

The Entrepreneur Information System (EIS) established by the Turkish Ministry of Industry and Technology (MoIT) is an integrated data source for strategic research, data-driven decisions, and academic studies. Data on economic activity from enterprises that generate commercial income in the domestic economy are aggregated in a central database. A traditional database structure is used in the EIS based on tables and a system of keys to link related data across different tables. The project arose from the need to determine whether blockchain-based databases can be used in the EIS to provide a more secure, decentralized platform for storing and sharing business data.

A hybrid TES project on Improvement of Public-sector Efficiency Using a Blockchain-based Database was implemented 4–7 July in Ankara and Bolu, Türkiye, by the NPO of Türkiye. Thirty-eight participants from the MoIT and other EIS stakeholder institutions joined training and workshop sessions conducted by two resource persons from India and Singapore. The project examined methods to increase efficiency using blockchain-based databases in the public sector.

**Program coverage:** *Consultation on the application of blockchains in the EIS; Overview of blockchain technology (BT); The role of databases in BT; Advantages, disadvantages, and best practices of BT; Potential of BT for increasing productivity in the public sector; Suitability of BT in EIS data acquisition processes; Roadmaps for the implementation of BT; Security and privacy considerations in BT; and Impacts of BT on efficiency and service delivery.*

### The Revolution in Decarbonization: Rebuilding Corporate Sustainable Competitiveness

“Sustainable” and “net zero” have become major global issues, especially under the Carbon Border Adjustment Mechanism (CBAM) developed by the EU, which has an impact on national policies and industrial economies. To reach the global climate goal of net-zero emissions by 2050, the ROC, as a key player in Asia’s climate policy, is also actively preparing to take steps toward achieving that



goal. Many big businesses in the ROC have already taken actions to reduce carbon emissions and be more energy efficient, and SMEs are encouraged to decrease their carbon footprints. As the cost of carbon emissions started to be counted, every industry has had to readjust business models and governance.

The CPC and APO Secretariat organized an in-country TES project on The Revolution in Decarbonization: Rebuilding Corporate Sustainable Competitiveness for the ROC, 17–19 October, which was attended by 28 entrepreneurs, advisers, consultants, and managers of SMEs. This project was designed to help participants rethink the influence of climate change and implement effective decarbonization strategies, enhance theoretical and practical knowledge of decarbonizing management, help companies identify decarbonization opportunities that work both environmentally and financially, and connect international resources to achieve the goal of net-zero emissions by 2050. Two resource persons from Japan and the ROK gave presentations and facilitated group work and discussions.

**Program coverage:** *Market mechanisms of the global trend for decarbonization; Essential competitive strategy for sustainable corporations: Enhancing energy efficiency and implementing renewable energy solutions; and Understanding ESG and decarbonization.*

### Vietnam National Productivity Forum

Productivity has been one of the key drivers of Vietnam's economic growth, particularly during its transition to a green, digital economy. This is emphasized in the National Productivity Master Plan Based on Science, Technologies, and Innovation for 2021–2030, Socio-economic Development Strategy for 2021–2030, and National Program on Labor Productivity Improvement by 2030 with the target of raising annual average labor productivity growth by 6.5%. The National Productivity Forum is a significant initiative by the Vietnamese government to address challenges and unlock potential for productivity growth.

An in-country TES project on the Vietnam National Productivity Forum was hosted by STAMEQ and the APO Secretariat, 12–13 December, to support the organization of the forum. The event attracted 700 participants including policymakers, productivity experts, academic researchers, representatives of international organizations, individuals, and businesses. Four APO resource persons, one from Malaysia and the UK, and two from Singapore participated in four thematic seminars and a plenary session to share their experiences and insights on significant measures for productivity improvement in Vietnam.

**Program coverage:** *Improving the quality of productivity policies and regulations; Scientific, technological, and innovative solutions for productivity enhancement; Human resources development for productivity promotion; Promoting productivity in localities; Accelerating Vietnam's development with productivity drivers; and Good regulatory practices (GRP) for administrative reform.*

### Assessment of Vietnam's GRP Implementation

Vietnam has experienced steady increases in labor productivity in recent years, significantly contributing to socioeconomic advances. However, it still lags behind many other countries in the region and globally. With a target of achieving an annual labor productivity growth rate of 6.5% by 2030, the Vietnamese government has implemented various solutions and efforts, including enhancing its legal frameworks and regulations.

Recognizing the importance of international processes, systems, tools, and methods for improving regulatory quality, Vietnam is prioritizing the adoption of GRP. A face-to-face in-country TES project was hosted by STAMEQ and the APO Secretariat, 12–23 December, to assess Vietnam's implementation of GRP. The assessment aimed to identify gaps in the existing regulatory framework and practices at both national and local levels, providing valuable insights for further recommendations to enhance regulatory efficiency and increase productivity. The project was attended by 50 participants, and two resource persons from Singapore and the UK conducted assessments in Hanoi and Ho Chi Minh City. The assessment report will be shared with Vietnam in early 2024.

**Program coverage:** Vietnam's National Productivity Forum; Latest trends in achieving policy and regulatory goals; Mechanisms and policies that hinder productivity and business development; International best practices in productivity promotion initiatives; Directions and solutions to promote productivity activities locally; Meeting with the Chairman of Ho Chi Minh City on GRP cooperation; Workshop on GRP for Administrative Reform; Introduction to GRP for administrative reforms; Embracing GRP to enhance government performance: Suggested implementation strategies; GRP implementation in Malaysia: Experiences and lessons learnt; Singapore GRP implementation to support SMEs: Experiences and lessons learnt; Strategies and solutions with GRP adoption for administrative reforms in Vietnam; Assessment of GRP adoption in Phu Nhuan District People's Committee; and Development of an assessment report on Vietnam's GRP implementation.

## vi. Demonstration Companies

### Productivity Improvement in Energy and Mining Sectors through Knowledge Management

In 2019, Mongolia's mining sector accounted for approximately 22% of GDP and 70% of exports. However, challenges such as a lack of proper infrastructure and environmental issues have impacted the productivity growth of the sector. Knowledge management (KM) applications can assist in decision-making in today's complex, uncertain, and volatile environment, and identifying and measuring knowledge assets is crucial for business success. Companies should establish processes, encourage behavioral changes, and provide training to employees for effective KM.

The MPO and APO Secretariat organized an in-country DMP project on Productivity Improvement in Energy and Mining Sectors through Knowledge Management. It was implemented online on 7 April, 19 May, 15 August, and 13 October and face-to-face 24–28 April, 5–9 May, 18–22 September, and 6–9 November for three demonstration companies: Erdenet Mining Corporation State-owned Enterprise; Thermal Power Plant No. 3 Joint Stock Company; and Cable Utilization and Maintenance Center, Ulaanbaatar Electricity Distribution Network Joint Stock Company. The demonstration companies in this project had been implementing basic and some advanced KM tools. However, they needed to manage larger amounts of data and information accumulated over the years in making business decisions and functioning more efficiently. The project was completed with a dissemination conference on 9 November.

### Application of Lean Management Systems in the Chemical Industry

Lean management (LM) is an approach to managing and organizing work to improve performance. Lean relies on delivering value from customers' perspectives, eliminating waste, and continuous improvement, resulting in small, incremental, but continuous changes in processes, adding value through efficiency and quality improvement. There has been a significant increase in the use of imported chemical inputs and related products in the past 10 years in Bangladesh. It is estimated that imports accounted for 70% of chemical demand and 3.5% of the total import value just before the pandemic. LM applications can help companies under the Bangladesh Chemical Industries Corporation (BCIC) to improve productivity through waste identification and streamlining business processes.

The NPO, Bangladesh, and APO Secretariat organized an in-country DMP project on Application of Lean Management Systems in the Chemical Industry for Bangladesh (stage 1). It was held online on 20 and 25 July and 5, 13, and 17 September, and face-to-face 13–16 August, attended by four demonstration companies, including one to be dropped and another to be added. The sessions were facilitated by a resource person from Japan and one from the NPO, Bangladesh.

**Program coverage:** The kick-off meeting included presentations by the demonstration companies on current issues and challenges and LM overview and plan by the resource person. For the first visit in the face-to-face sessions, the resource person and APO Secretariat staff visited the demonstration companies to hold workshops on problem assessment and analysis, setting LM goals, and identifying

and prioritizing LM projects. In subsequent online sessions, the resource person gave presentations on the review of root cause analysis and productivity tools.

### Productivity Improvement in Manufacturing SMEs

SMEs are the bedrock of the economy in Sri Lanka. Comprising 75% of all active enterprises, SMEs provide 45% of employment and contribute 52% to GDP according to an ADB report in 2018. Thus, creating an environment conducive to SME growth and enhanced productivity is integral to achieving equitable economic growth in Sri Lanka.

Sri Lankan SMEs are defined as businesses with Rs16–750 million in annual turnover. Given their socioeconomic role, creating an environment conducive to their development and growth has been a focus area of successive Sri Lankan governments. However, many SMEs face challenges such as low productivity and quality. Particularly in the manufacturing sector, rapid price increases of goods and services including fuel, electricity, machinery, and raw materials hit their businesses hard. Productivity and quality improvement is thus crucial for boosting resilience and helping businesses to thrive.

A DMP project on applications of productivity tools and techniques such as 5S and kaizen in the manufacturing sector was started by the NPS and APO Secretariat with the participation of three SMEs in December 2023. The project plans to analyze challenges and opportunities for each demonstration company and guide applications of productivity tools and techniques to improve production processes and product quality. In stage 1, a resource person from Japan analyzed the challenges and opportunities related to productivity through a diagnostic survey of the demonstration companies, and the improvement plan and action plan for each company were agreed upon by all stakeholders. The project will continue to implement the plans in stage 2 and to evaluate and conduct dissemination activities, ensuring multiplier effects of the project in the country, in stage 3.

### Workplace Environment Management through Lean Manufacturing in the Surgical Instruments Industry

The surgical instrument sector is one of five prime export-oriented sectors in Pakistan. It consists of a multitude of SME manufacturers with a few large units. It has been facing challenges such as a lack of ongoing product and process improvements targeted at developing products that command higher prices in global marketplaces. This explains its low market share. Pakistan's surgical instrument sector contributes 0.7% of the world total, and exports have increased gradually over the past 10 years. It is considered a key SME export sector and contributes 0.13% to GDP, with at least 150,000 workers in direct employment and 300,000–400,000 in indirect employment.

However, the industry faces various challenges. Its export potential is limited, and the concentration risk is high as nearly 80% of surgical instruments are exported to 15 countries. The sector has also been facing bottlenecks in adoption of new technology, and there is no training institute for capacity building of human resources. Increasing productivity by addressing environmental concerns in the workplace, metal dust-intensive production processes, high input costs, labor-intensive conventional production techniques, and health and safety issues is crucial.

A DMP project to establish five demonstration companies on the applications of lean management (LM) systems in the surgical instrument sector, showcase the processes and tangible results of productivity improvement and innovation with applications of LM tools and techniques, and use the results as benchmarks for productivity improvement through LM systems in other APO members was initiated by the APO and NPO of Pakistan in October 2023. Two resource persons from Japan analyzed productivity challenges and opportunities through a diagnostic survey, and the improvement plan and action plan for each company were agreed upon by all stakeholders. The project will continue to implement the plans in stage 2 and evaluate and conduct dissemination activities, ensuring multiplier effects of the project in the country, in stage 3.

## vii. APO Vision 2025 Outreach

### APO Vision 2025 Outreach

The APO Vision 2025 is meant to achieve “inclusive, innovation-led productivity growth in Asia and the Pacific.” This involves specific goals, key result areas, and deliverables, which are translated into program areas and annual project lineups to ensure that APO activities are aligned with the intent and direction of the vision.

The APO Vision 2025 Outreach (VSN) Program was launched in 2022 to enable members to proactively disseminate information on the vision and engage all stakeholders in achieving its goals. Financial support of up to USD25,000 per year is provided to each APO member to cover activities under two biennial themes for 2022 to 2025: 1) Innovations for Higher Quality (2022–23); and 2) Inclusive Productivity (2024–25).

Maintaining the momentum from the previous year, the 2023 VSN Program was implemented through innovative, impactful activities. By 31 December, seven of 18 participating members had successfully completed VSN activities and submitted the final reports. So far, 25 public events have been held, which involved 81 resource persons, 7,309 participants, and the production and distribution of 142,106 promotional materials (videos, brochures, posters, flyers, notebooks, etc.), and publications. Some activities received high levels of public attention such as the Conference on Innovation for Higher Productivity and Workshop on Sustained Productivity Growth (Bangladesh); Lao National Productivity Festival (Lao PDR); and the Productivity Roadshow 2023, Productivity Youth Camp, and Productivity Webtoon for Youth (Thailand). The figures are expected to surge after the full completion by participating members, promising more profound effects ahead.

## viii. APO Award Program

### APO National Award

The APO Award Program was introduced more than four decades ago to recognize individuals with outstanding achievements and contributions in the area of productivity at national and regional levels. It also aims to raise the visibility of the APO as the leading international organization promoting productivity.

After revision in the national award procedures and conditions in 2021, NPOs were empowered to confer awards annually. The revised program increased recognition of NPOs within member economies as the main bodies for productivity promotion and enhancement. Each NPO manages the APO National Awards by announcing them, setting up selection panels, shortlisting and selecting recipients, organizing conferment ceremonies, and promoting the events nationwide.

The APO Secretariat supports the program by providing technical assistance in preparation for and conferment of the awards, along with certificates, plaques, and monetary prizes for selected recipients. Financial assistance to support the local implementation costs of NPOs is also provided by the APO.

In 2023, the APO National Award was conferred by the NPOs of India, I.R. Iran, Mongolia, and Sri Lanka to seven awardees.

#### National Award Program

APO Members	Awardees
India	2
I.R. Iran	1
Mongolia	2
Sri Lanka	2

## APPENDIX 3

## ABBREVIATIONS AND ACRONYMS

<b>AB</b>	Accreditation Body	<b>MIE</b>	Middle-income economy
<b>BCN</b>	Bilateral Cooperation between NPOs	<b>MOU</b>	Memorandum of understanding
<b>BE</b>	Business excellence	<b>MPC</b>	Malaysia Productivity Corporation
<b>CB</b>	Certification body	<b>MPO</b>	Mongolian Productivity Organization
<b>CBD</b>	Certification body development	<b>MSME</b>	Micro, small, and medium enterprise
<b>CE</b>	Circular economy	<b>NARO</b>	National Agriculture and Food Research Organization, Japan
<b>COE</b>	Center of Excellence	<b>NIS</b>	National innovation system
<b>CPC</b>	China Productivity Center	<b>NPC</b>	National Productivity Council, India
<b>CSA</b>	Climate-smart agriculture	<b>NPCC</b>	National Productivity Centre of Cambodia
<b>DAP</b>	Development Academy of the Philippines	<b>NPEDC</b>	National Productivity and Economic Development Centre, Nepal
<b>DLN</b>	Digital learning	<b>NPO</b>	National productivity organization; National Productivity Organisation (Bangladesh); National Productivity Organisation (I.R. Iran); National Productivity Organization (Pakistan)
<b>DMP</b>	Development of Demonstration Companies	<b>NPS</b>	National Productivity Secretariat, Ministry of Labour and Foreign Employment, Sri Lanka
<b>ESG</b>	Environment, social, and government	<b>NTPC</b>	National Training and Productivity Centre, Fiji National University
<b>FAO</b>	Food and Agriculture Organization, UN	<b>OSM</b>	Observational Study Mission
<b>FSQI</b>	Food safety, quality, and innovation	<b>P-Talk</b>	Productivity Talk
<b>FTPI</b>	Thailand Productivity Institute	<b>PLWS</b>	Productivity-linked wage system
<b>FVC</b>	Food value chain	<b>PR</b>	Public relations
<b>GB</b>	Governing Body	<b>PWDs</b>	Persons with disabilities
<b>GBM</b>	Governing Body Meeting	<b>SDGs</b>	Sustainable Development Goals of the UN
<b>GHG</b>	Greenhouse gas	<b>SM</b>	Smart manufacturing
<b>GP</b>	Green Productivity	<b>SME</b>	Small and medium enterprise
<b>GRP</b>	Good regulatory practices	<b>SNP</b>	Specific National Program
<b>HACCP</b>	Hazard and critical control point	<b>SGPC</b>	Singapore Productivity Centre
<b>IOSM</b>	Individual-country Observational Study Mission	<b>TES</b>	Technical Expert Services
<b>IoT</b>	Internet of Things	<b>TFP</b>	Total factor productivity
<b>JPC</b>	Japan Productivity Center	<b>TPM</b>	Total productive maintenance
<b>KDI</b>	Korea Development Institute	<b>TQM</b>	Total quality management
<b>KM</b>	Knowledge management	<b>TUSSID</b>	Turkish Management Science Institute
<b>KPC</b>	Korea Productivity Center	<b>TWG</b>	Technical Working Group
<b>LM</b>	Lean management	<b>UNDP</b>	United Nations Development Programme
<b>LMIC</b>	Lower middle-income country	<b>VNPI</b>	Vietnam National Productivity Institute
<b>LNPO</b>	Micro, Small and Medium Enterprise Promotion Agency, Lao National Productivity Organization, Ministry of Industry and Commerce	<b>WSM</b>	Workshop Meeting of Heads of National Productivity Organizations
<b>M&amp;E</b>	Monitoring and evaluation		
<b>MAFF</b>	Ministry of Agriculture, Forestry and Fisheries, Japan		



**Annual Report**  
**2023**

ISBN: 978-92-833-2524-6 (print)  
ISBN: 978-92-833-2525-3 (PDF format)