TECHNICAL COOPERATION HIGHLIGHTS

2024-2025







ESCAP
Economic and Social Commission for Asia and the Pacific



*The shaded areas of the map indicate ESCAP members and associate members.**

The Economic and Social Commission for Asia and the Pacific (ESCAP) is the most inclusive intergovernmental platform in the Asia-Pacific region. The Commission promotes cooperation among its 53 member States** and 9 associate members in pursuit of solutions to sustainable development challenges. ESCAP is one of the five regional commissions of the United Nations.

The ESCAP secretariat supports inclusive, resilient and sustainable development in the region by generating action-oriented knowledge, and by providing technical assistance and capacity-building services in support of national development objectives, regional agreements and the implementation of the 2030 Agenda for Sustainable Development.

** The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.*

*** By diplomatic note dated 30 January 2026, the United States of America notified the Executive Secretary of ESCAP of its decision to withdraw from the Commission.*

TECHNICAL COOPERATION HIGHLIGHTS

2024-2025



ESCAP
Economic and Social Commission for Asia and the Pacific



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FOREWORD

Recent years have brought meaningful advances across Asia and the Pacific, reflected in efforts to strengthen resilience, broaden economic opportunities and pursue more sustainable patterns of growth. Many middle-income countries are drawing on their expanding capabilities to diversify their development pathways, while several least developed countries are making steady progress toward graduation. These developments illustrate a dynamic regional landscape shaped by deepening regional collaboration, the expansion of South-South cooperation and the growing role of emerging assistance providers.

Within this evolving context, ESCAP serves as the most inclusive intergovernmental platform in the Asia Pacific region, where governments engage in dialogue, exchange knowledge and collaborate on shared priorities. The secretariat supports resilient and sustainable development by generating action-oriented knowledge and providing technical assistance and capacity building services that contribute to regional agreements and cooperation efforts. Its work brings together insights from across the breadth of ESCAP's mandate, creating space for solutions that reflect how economic, social and environmental factors are increasingly interconnected.

Building on this foundation, ESCAP helps member States address shared development challenges and advance the 2030 Agenda for Sustainable Development through integrated analytical work and targeted technical cooperation. By supporting the design of evidence-based policies, strengthening institutions and fostering regional solutions, ESCAP promotes sustainable, resilient and inclusive development across Asia and the Pacific. These contributions are reflected in this publication, which highlights success stories demonstrating how ESCAP's support translates into tangible results across the region.

The Technical Cooperation Highlights 2024–2025 demonstrates how this integrated and demand-driven approach delivers results. ESCAP's work across the region reflects its five pillars and the broader nexus between financing, connectivity, technology, leaving no one behind and green growth and climate action. The report highlights efforts to mobilize finance and align policies that support low-carbon, resilient and sustainable futures. It illustrates how strengthened connectivity across transport, digital, economic and energy systems can drive inclusive growth and deepen regional integration. It showcases the role of technology, data and geospatial innovation in accelerating progress toward the SDGs. It underscores the importance of addressing intersecting inequalities to ensure that no one is left behind. Finally, it explores pathways for green growth and more ambitious climate action, responding to rising vulnerabilities and economic pressures across the region.

Looking ahead, ESCAP will continue to apply its analytical strengths, regional convening role and commitment to practical, cross-sectoral solutions to help countries pursue development pathways that are sustainable, resilient and future-ready.





Armida Salsiah Alisjahbana

Under-Secretary-General of the United Nations and Executive Secretary of ESCAP

ACRONYMS

ADB	Asian Development Bank
AI	Artificial Intelligence
AIR CAS	Aerospace Information Research Institute, Chinese Academy of Sciences
AMDV	ASEAN Minerals Development Vision
APCICT	Asian and Pacific Training Centre for Information and Communication Technology for Development
APIEM	Asia-Pacific Initiative on Electric Mobility
APIS	Asia-Pacific Information Superhighway
APSMD	ASEAN Principles on Sustainable Minerals Development
APTA	Asia-Pacific Trade Agreement
ASEAN	Association of Southeast Asian Nations
CASA	Clean Air for Sustainable ASEAN
CDRI	Coalition for Disaster Resilient Infrastructure
CIRAD	French Agricultural Research Centre for International Development
CPTA	Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific
CRISP	Climate-Resilient and Inclusive Social Protection
DA	Development Account
DiDRR	Disability-inclusive Disaster Risk Reduction
DRR	Disaster Risk Reduction
ECF	European Climate Foundation
ESCAP	Economic and Social Commission for Asia and the Pacific
FDI	Foreign Direct Investment
GEEW	Gender Equality and the Empowerment of Women
GGI	Green Grids Initiative
GHG	Greenhouse Gas
GIS	Geographic Information System
GISTDA	Geo-Informatics and Space Technology Development Agency
IB	Inclusive Business
ICT	Information and Communication Technology
iRAP	International Road Assessment Programme
KPHA	Korea Ports and Harbours Association
LDCs	Least Developed Countries

LICA	Lao-facilitated Initiative on Agroecology
LLDCs	Landlocked Developing Countries
LNOB	Leaving No One Behind
NCAP	National Cooling Action Plan
NDCs	Nationally Determined Contributions
OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the High Commissioner for Human Rights
RIPAP	Regional Investment Promotion Action Plan
RPTC	Regular Programme of Technical Cooperation
SDGs	Sustainable Development Goals
SIDS	Small Island Developing States
SINGG	Seoul Initiative Network on Green Growth
UNEP	United Nations Environment Programme
WIFI	Women ICT Frontier Initiative
XB	Extrabudgetary Funds

ABBREVIATIONS

CO_2	Carbon dioxide
COP	United Nations Climate Change Conference


APESD
13th APFSD
Asia-Pacific Forum on
Sustainable Development

ESCAP AT A GLANCE

The Economic and Social Commission for Asia and the Pacific (ESCAP) is the regional arm of the United Nations, playing a unique role as the most inclusive intergovernmental forum for countries and territories of Asia and the Pacific.

ESCAP was established in 1947 and forms the largest of the United Nations' regional commissions in terms of population served. ESCAP's mandate, as defined in its terms of reference, is to promote economic and social development among countries of Asia and the Pacific.

The Asia-Pacific region faces an increasingly complex and interconnected set of development challenges in a rapidly evolving global environment. Economic slowdown, persistent inflationary pressures and heightened geopolitical fragmentation threaten to set back past development gains. These have also been worsened by a ongoing vulnerabilities in food and energy systems, further compounded by the widespread, rapid and intensifying impacts of climate change.

This fast-evolving development landscape calls for integrated, adaptive and cross-sectoral policy responses to advance the 2030 Agenda for Sustainable Development. ESCAP's distinctive position, promoting multidisciplinary and cross-sectoral cooperation among countries in the Asia-Pacific region to achieve inclusive and sustainable development, has allowed it to pivot nimbly to respond to crises that are increasingly interconnected, cross-cutting and transboundary in nature.

53 Member States[1]

9 associate members

4.8 billion people[2]

5 Subregional Offices

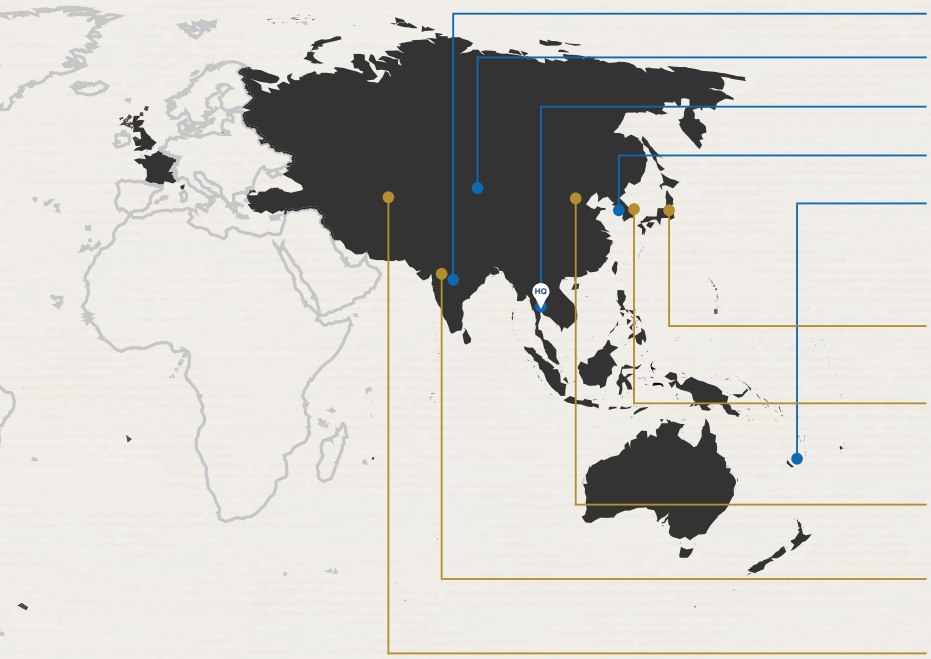
5 Regional Institutions

[1] By diplomatic note dated 30 January 2026, the United States of America notified the Executive Secretary of ESCAP of its decision to withdraw from the Commission.

[2] 2025 ESCAP Population Data Insights

HOW WE WORK

From its headquarters in Bangkok, ESCAP provides a forum for its member States that promotes regional cooperation and collective action, assisting countries in building and sustaining shared economic growth and social equity. ESCAP disseminates good development practices, facilitates knowledge-sharing and provides technical assistance to member States in the implementation of policy recommendations. The norm setting and policy work of ESCAP ultimately affects people's lives in a positive way by assisting countries to shape and implement a more balanced and inclusive development agenda for the region.



Subregional Offices

1. **South and South-West Asia**, New Delhi
2. **North and Central Asia**, Almaty
3. **South-East Asia**, Bangkok
4. **East and North-East Asia**, Incheon
5. **Pacific**, Suva

Regional Institutions

1. **Statistical Institute for Asia and the Pacific**, Chiba
2. **Asian and Pacific Training Centre for Information and Communication Technology for Development**, Incheon
3. **Centre for Sustainable Agricultural Mechanization**, Beijing
4. **Asian and Pacific Centre for Transfer of Technology**, New Delhi
5. **Asian and Pacific Centre for the Development of Disaster Information Management**, Tehran

ESCAP Added Value

ESCAP supports its member States to achieve development results such as:

- Effective policies and strategies for integrating the economic, social and environmental dimensions of sustainable development, mindful of the diversity and different levels of development between countries.
- Measuring progress in achieving the SDGs and other internationally agreed development goals.
- A stronger, more representative and coherent regional voice to influence internationally agreed development commitments at the global level.
- Enhanced capacities to engage in regional cooperation and economic integration mechanisms.

ESCAP Core Functions



- On critical and emerging issues
- Through intergovernmental processes to deliberate and build regional consensus on key development priorities and global norms
- Based on decisions made by member States to support implementation and service capacity development requirements

GLOBAL

2030 Agenda for Sustainable Development

contains 17 goals and 169 targets for protecting the planet, ensuring human prosperity, and fostering peace, to be achieved through revitalizing global partnerships.

REGIONAL

ESCAP
Economic and Social Commission for Asia and the Pacific

Regional Road Map for Implementing the 2030 Agenda for Sustainable Development in Asia and the Pacific was developed by ESCAP member States for Asia and the Pacific and identifies 11 priority areas of regional cooperation for implementation of the 2030 Agenda.

ESCAP AREAS OF WORK



HOW WE ENGAGE IN TECHNICAL COOPERATION



Based on the mandates given by member States, its intergovernmental and analytical work, ESCAP designs capacity development interventions. The scope of these interventions can be regional, subregional or at the country level.

At the national level, ESCAP supports member States **under seven thematic areas**, that are linked with the implementation of the global and regional frameworks. ESCAP provides targeted assistance through three complementary modes of support – namely **products and services, technical expertise,** and **online platforms and databases** – to help accelerate the delivery of the 2030 Agenda especially for countries in special situations.


17
PARTNERSHIPS
FOR THE GOALS
14





PARTNERSHIPS FOR SUSTAINABLE DEVELOPMENT

With its dedicated Goal 17, the 2030 Agenda for Sustainable Development recognizes the crucial role of partnerships in achieving ambitious global targets, integral for mobilizing and sharing knowledge, expertise, technology, and financial resources, and bringing together national governments, the international community, civil society, the private sector, and other actors. As, the 2030 Agenda enters its final five-year period, it provides an opportune moment to assess progress towards the Sustainable Development Goals. While certain goals have seen advancements, the overall pace has been moderate, underlining the critical need to accelerate and scale up collaborative efforts. The success stories presented in this edition of the Technical Cooperation Highlights underscore the significance of cross-sectoral and cross-cutting collaboration in navigating the complexities of sustainable development, emphasizing the central role partnerships play in fostering innovation, facilitating knowledge exchange, and promoting inclusive decision-making. The following is an outline of ESCAP's approach to fostering cross-sectoral collaboration, providing an overview of its integrated partnerships and coordinated efforts across sectors, as well as information on the main contributors to and beneficiaries of ESCAP capacity development programmes in 2024-2025.

ESCAP AS PARTNER

As part of the UN system, ESCAP provides a neutral and impartial platform and leverages its network and collaborations with other UN agencies, programmes, and funds.

Comparative Advantages	
UN SYSTEM	ESCAP is the regional arm of the UN development system in Asia and the Pacific. ESCAP supports UN collaboration at the regional level through its role in the Regional Collaborative Platform for Asia and the Pacific in cooperation with the resident coordinators and the UN country teams.
REGIONAL FOCUS	ESCAP has nearly 80 years of accumulated regional knowledge and expertise. ESCAP tackles unique development challenges, offering tailored solutions for regional and transboundary issues.
INCLUSIVE INTERGOVERNMENTAL PLATFORM	ESCAP, a member State-driven organization, fosters consensus among its 53 members[3] and 9 associate members. ESCAP uses its convening power to drive collaborative dialogue and initiatives to develop and promote regional policy and regulatory frameworks for inclusive sustainable development in Asia and the Pacific.
MULTIDISCIPLINARY TECHNICAL AND POLICY EXPERTISE	ESCAP provides multidisciplinary technical and policy expertise to address diverse regional challenges. ESCAP offers tailored programmes that support its member States in finding holistic solutions to complex development questions.
SUSTAINABLE DEVELOPMENT IMPACT THROUGH DIVERSE PARTNERSHIPS	ESCAP is an effective development partner, collaborating with a range of stakeholders to achieve shared development goals through tailored partnership modalities. Through its South-South cooperation initiatives, ESCAP promotes innovative approaches to address challenges and identifies effective solutions that can be scaled up and replicated across the region.

ESCAP'S APPROACH TO PARTNERSHIPS

ESCAP's approach to partnerships is based on:

Shared priorities and interests
Matching ESCAP's strengths with member States' needs and with partners' priorities

Engagement
Working together on project design, implementation and evaluation

Communication
Regular informal and formal periodical consultations

Accountability
Transparent performance and financial reporting

Evaluation and learning
Ensuring continuous improvement and better results

[3] By diplomatic note dated 30 January 2026, the United States of America notified the Executive Secretary of ESCAP of its decision to withdraw from the Commission.

PARTNERSHIP LANDSCAPE AT ESCAP

In 2024-2025, ESCAP continued to enhance and to expand partnerships with a focus on accelerating progress towards the Sustainable Development Goals addressing thematic issues across its eight programmatic areas of work.

ESCAP provides support to member States through targeted technical assistance and capacity-building activities, funded through two main sources:

72

TOTAL NUMBER OF DONORS IN 2024-2025

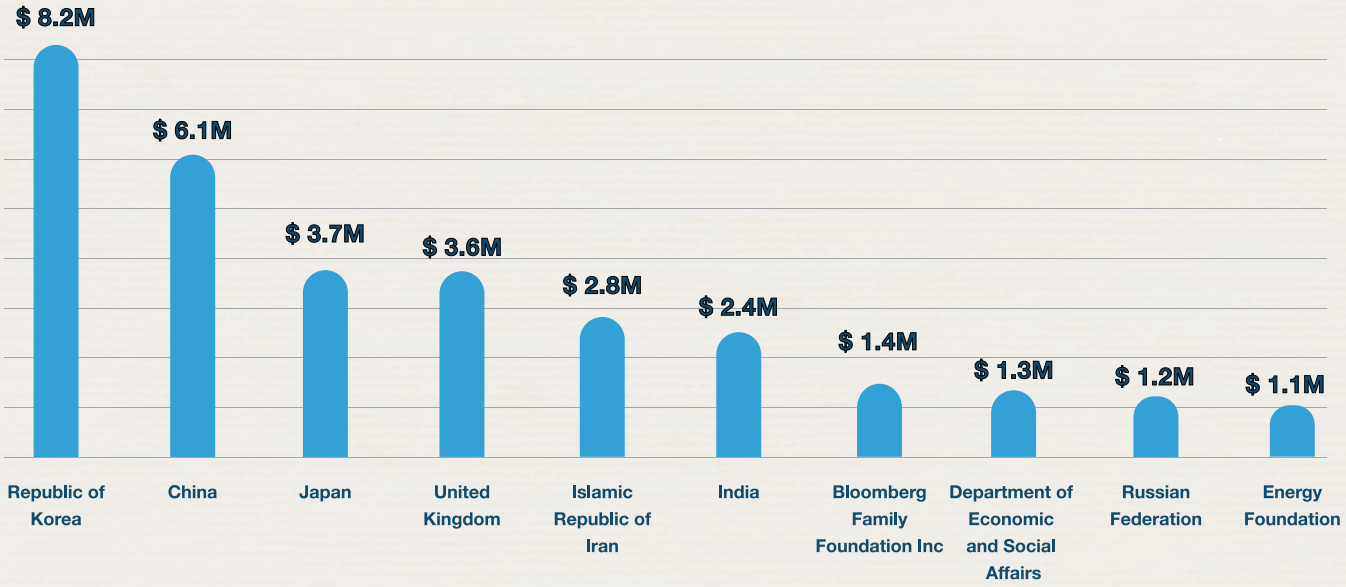
Regular budget (RB)

RB resources approved by the General Assembly for the Regular Programme of Technical Cooperation (RPTC) and for the Development Account (DA).

Extrabudgetary funds (XB)

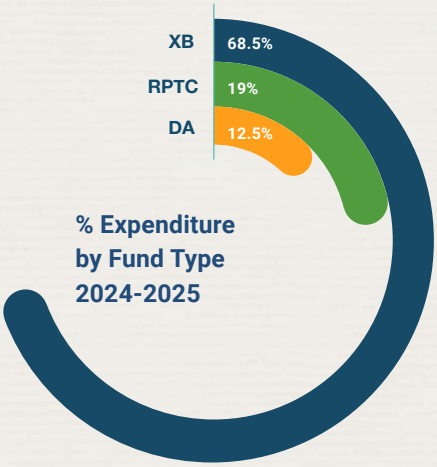
XB received in the form of financial contributions from member States, bilateral donors, other UN agencies, international and regional organizations, multilateral development banks, private sector foundations, philanthropies, and civil society organizations.

Top 10 Donors 2024-2025 (US$)

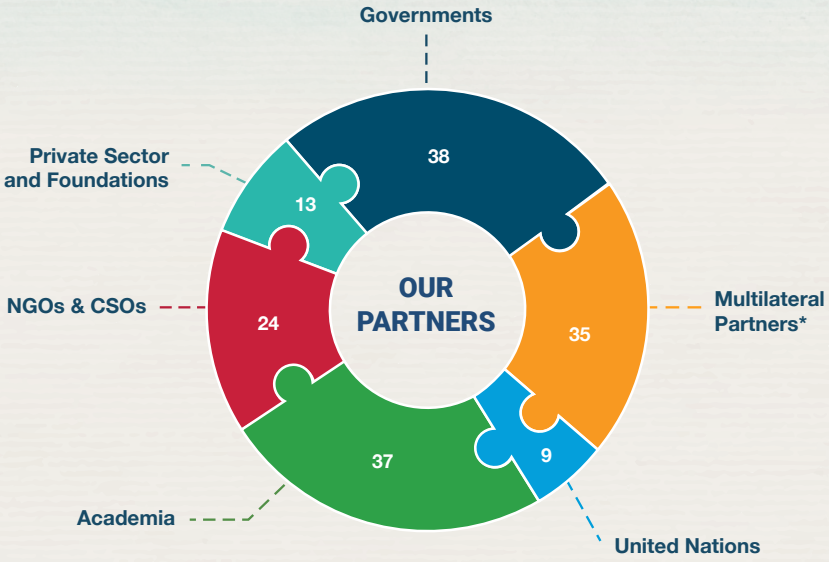


2024-2025 Funding:

US$ 38.4M



Type of Partners



*Multilateral partners are regional and subregional organizations, separate from the UN system, that work towards building regional consensus on shared priorities, addressing common problems and sharing development knowledge and good practices across Asia and the Pacific.

PARTNERSHIP ARRANGEMENTS

To ensure it is fit for purpose, every partnership ESCAP engages in has its own unique structure and set-up. Accountability and commitment are at the core of all ESCAP partnership framework agreements. Trust Fund agreements are signed with donors and detail the administrative provisions governing donor contributions to ESCAP's projects, in accordance with the UN Financial Regulations and Rules. The other three most common approaches of formalizing a partnership include:

- **Memorandum of Understanding (MOU)** is a framework agreement with ESCAP's programme partners at the highest level, e.g. with regional or international organizations. It delineates partnerships at the organizational level with the scope of cooperation covering more than one area of ESCAP's work while still focused on specific areas, where there is no transfer of funds;
- **Memorandum of Agreement (MOA)** is an agreement reflecting a partnership for a specific activity (e.g. organizing a meeting) where there is no transfer of funds. The main purpose is to clarify the roles and responsibilities of ESCAP and a partner organization in a specific activity;
- **Letter of Agreement (LOA)** covers transfer of funds from ESCAP to a partner institution in order to undertake technical cooperation activities contributing toward the achievement of their respective work programmes.

Number of Partners by Agreement Type



Total number of formal partnership agreements

168

PARTNERSHIP IN ACTION

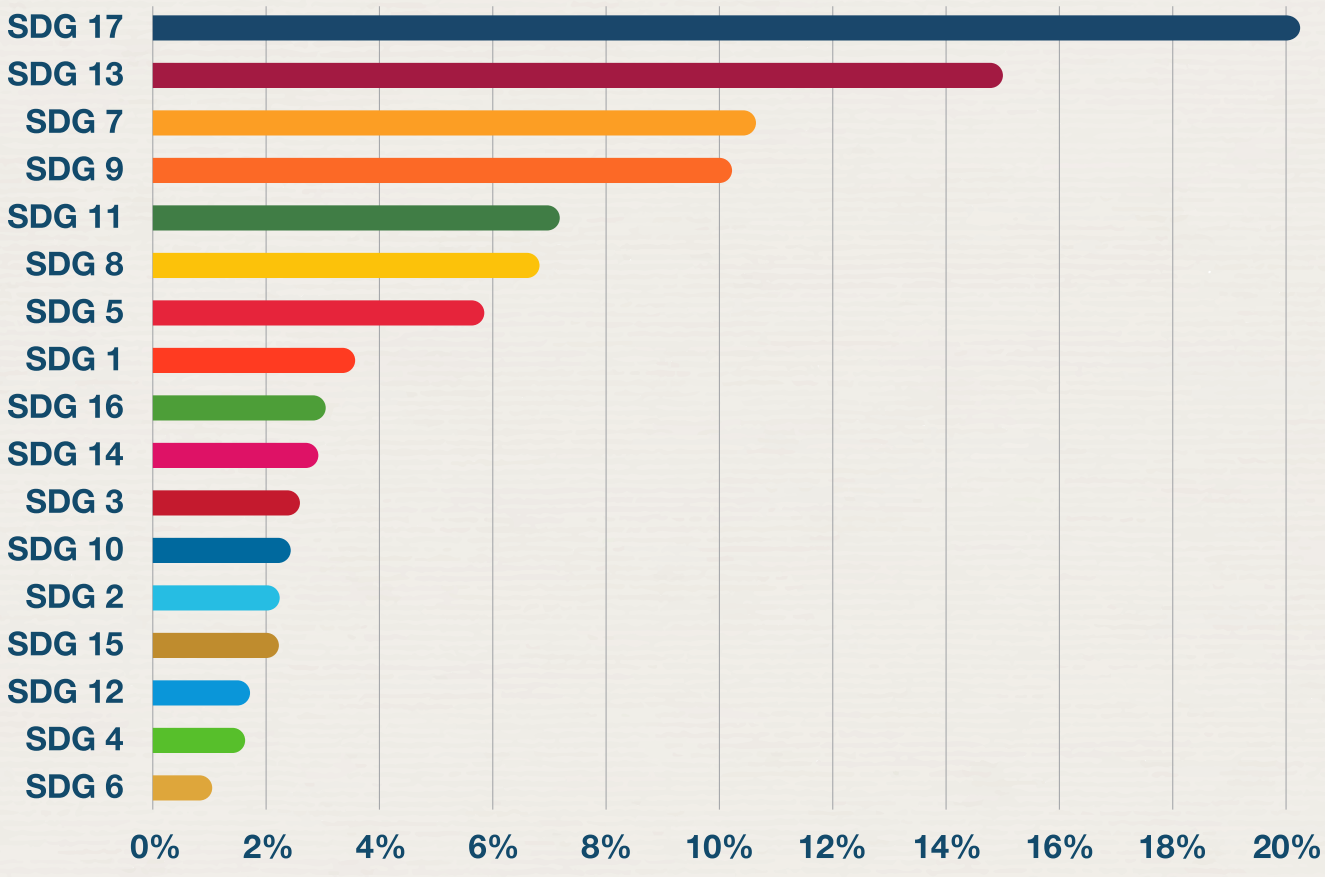
225 capacity development projects implemented in 2024-2025

1,242 Seminars, Workshops, and Trainings

828 Technical Advisory Services

733 Publications and Knowledge Products

% Estimated Expenditure by SDGs 2024-2025

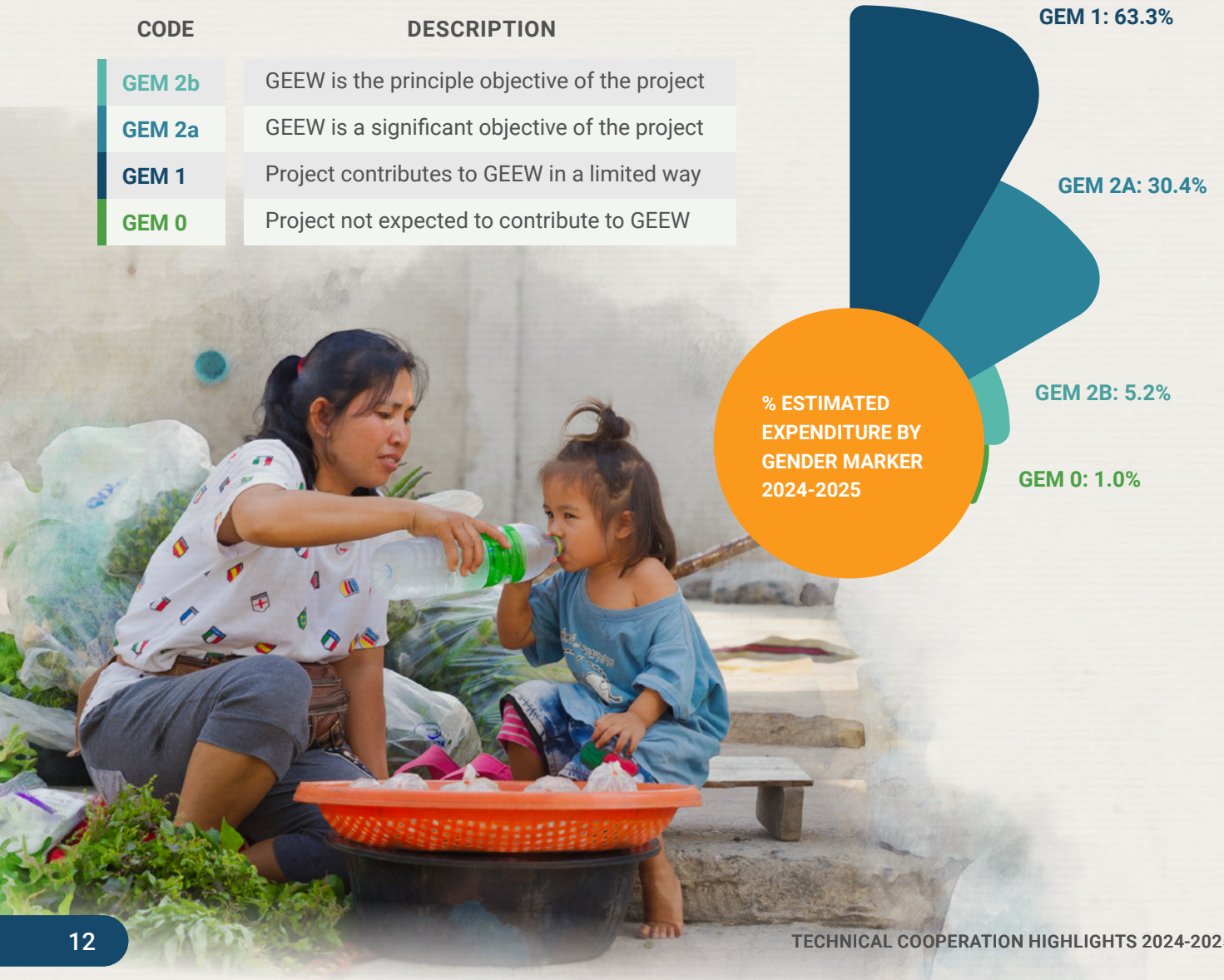


MAINSTREAMING GENDER EQUALITY AND EMPOWERMENT OF WOMEN

The gender marker (GEM) is a financial tracking mechanism for gender equality and the empowerment of women (GEEW), which was first pioneered by the OECD-Development Assistance Committee. It is now a systematic requirement for all institutions within the UN system to implement the GEM mechanism to track financial allocation of resources towards GEEW. Recognizing the multiplier effects of GEEW on achieving inclusive and sustainable economic growth, poverty eradication and sustainable development, UN entities take steps to track resource allocation based on gender equality measures.

ESCAP first introduced the GEM in late 2019, and applied it gradually on projects across different budget sources. As of September 2021, it was determined that all ESCAP projects should at least contribute to GEEW in some way and have a minimum rating of GEM1 (GEM0 projects, if any, need to have its rating strongly justified). Through its multidisciplinary platform, ESCAP has had the opportunity to strengthen the gender dimension in its implementation of the SDGs. By enhancing the capacity of staff to mainstream gender in their respective work areas, as well as to identify synergies across substantive areas, ESCAP is ensuring delivery of gender-responsive results across the SDGs.

CODE	DESCRIPTION
GEM 2b	GEEW is the principle objective of the project
GEM 2a	GEEW is a significant objective of the project
GEM 1	Project contributes to GEEW in a limited way
GEM 0	Project not expected to contribute to GEEW



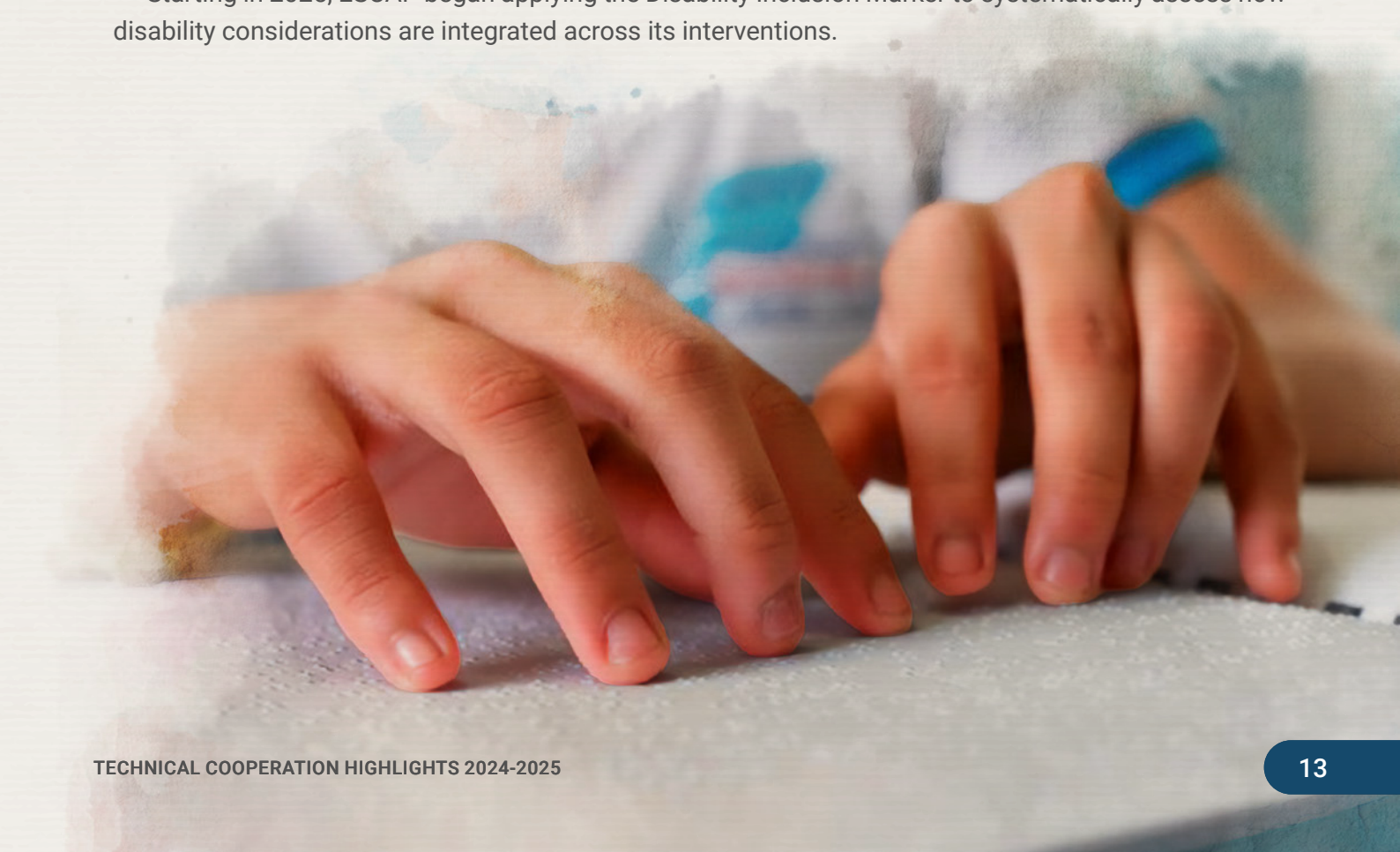
DISABILITY INCLUSION MARKER

The Disability Inclusion Marker is a tracking and accountability mechanism designed to strengthen the systematic integration of disability inclusion across project planning and implementation. It enables ESCAP to assess the extent to which its programmes promote the rights of persons with disabilities and contribute to inclusive development outcomes in line with the 2030 Agenda for Sustainable Development.

Recognizing that disability inclusion is essential to achieving inclusive and sustainable development, ESCAP applies a twin-track approach—mainstreaming disability inclusion across all areas of work while also supporting targeted initiatives that directly advance the rights and empowerment of persons with disabilities. By strengthening internal capacities and fostering meaningful engagement with organizations of persons with disabilities, ESCAP works to ensure that its programmes contribute to accessible, inclusive and rights-based development across the Sustainable Development Goals.

CODE	DESCRIPTION
Score 2	The rights of persons with disabilities and disability inclusion is the principal or primary objective of the project.
Score 1	The project contributes to the rights of persons with disabilities and disability inclusion in a significant way.
Score 0	The project does not substantially contribute to the rights of persons with disabilities and disability inclusion, but persons with disabilities may benefit from the outputs of the project.

Starting in 2025, ESCAP began applying the Disability Inclusion Marker to systematically assess how disability considerations are integrated across its interventions.



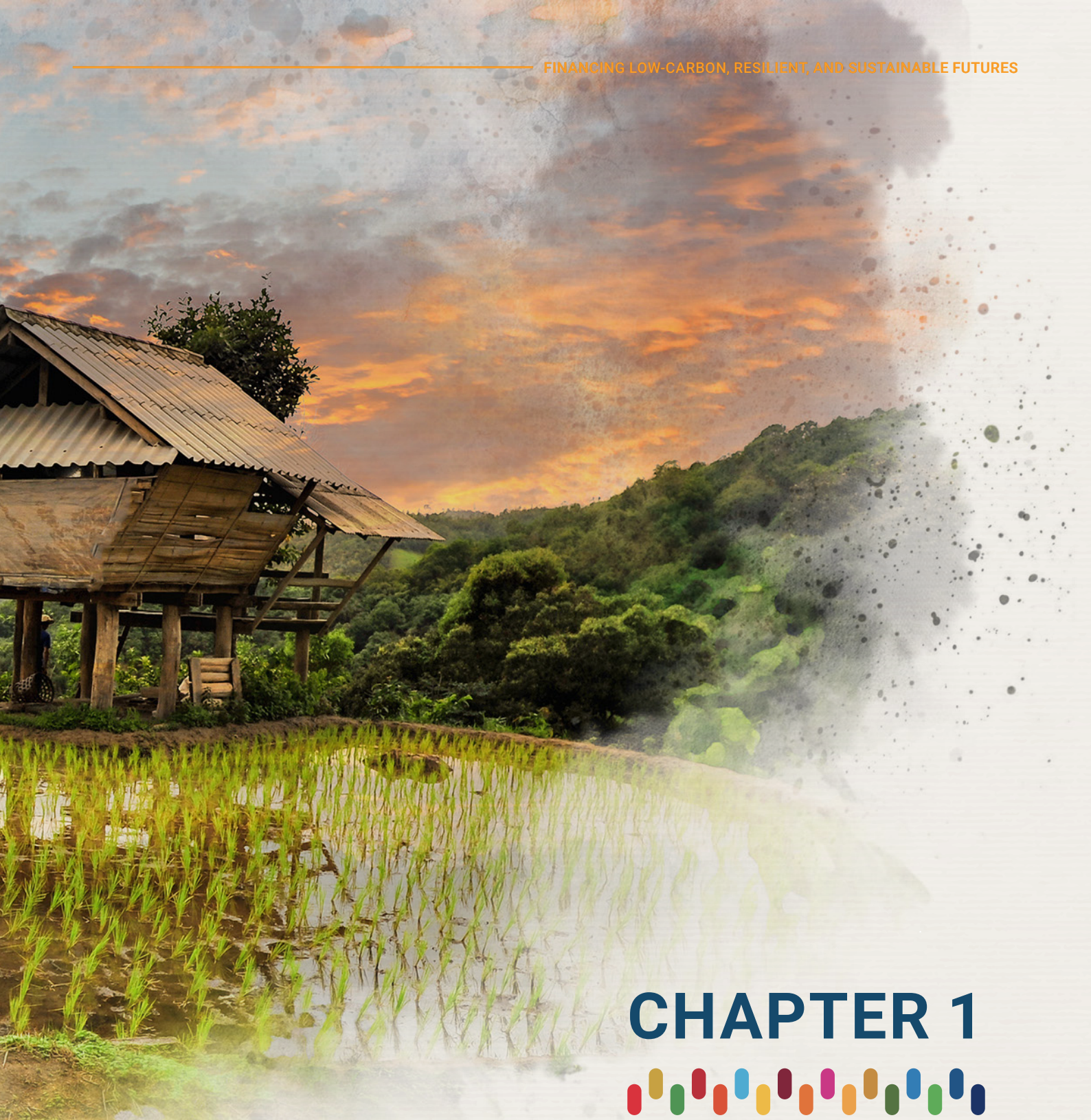




TECHNICAL COOPERATION HIGHLIGHTS

2024-2025





CHAPTER 1

FINANCING LOW-CARBON, RESILIENT, AND SUSTAINABLE FUTURES

The Asia-Pacific region is well positioned to benefit from the global transition to net zero. Countries are making progress in setting their net zero targets and strategically aligning policy frameworks and Nationally Determined Contribution (NDC) implementation plans with climate goals and targets. With continued growth in renewables and technological advancements across all major emission sources, the region has demonstrated remarkable leadership and innovation in advancing climate action.[4]

However, realizing this potential requires sustained financing at scale. Mobilizing investment towards energy transition and sustainable mobility pathways increasingly means navigating evolving global economic conditions, with heightened volatility shaping investor behaviour and increasing the premium placed on resilience and diversification. While renewable energy development has accelerated in many countries, progress remains uneven and financing gaps persist, particularly for large-scale infrastructure and enabling systems that support decarbonization.

Electrification of transport, including public transport and urban mobility solutions, is emerging as an important area where investment readiness, institutional coordination and access to finance determine the pace of transition. Achieving a just, equitable and inclusive transition therefore requires accelerated action by governments, strengthened investment frameworks and enhanced regional cooperation.[5]

Recent developments highlight why this area is a priority for ESCAP's technical cooperation. Investors are applying more rigorous analysis, preparing scenarios and placing emphasis on resilience and diversification, raising the importance of clear policy signals and enabling conditions that support quality investment.[6] The persistence of fossil fuel dominance in the region's energy mix and the financing and regulatory barriers to key decarbonization levers further highlight the need for coordinated, system-level reforms alongside scaled-up investment.[7]

Through its regional role in generating policy-relevant evidence and providing technical assistance and capacity-building, ESCAP supports member States in advancing national development objectives, regional agreements, and implementation of the 2030 Agenda. Its multidisciplinary expertise covering macroeconomic policy and financing, trade and investment, transport, environment and energy allows for targeted policy support at both national and regional levels. This includes work on project financing frameworks, sustainable finance instruments, regulation and disclosure frameworks, and carbon pricing mechanisms, ensuring that both public and private financing is accelerated for low-carbon futures.

[4] ESCAP (2025) Review of Climate Ambition in Asia and the Pacific: Readiness for NDC Implementation. Available at: https://repository.unescap.org/items/2cf11e71-5cb0-47a6-8ef1-0d40f63f7297

[5] ESCAP (2025) Transforming energy systems for a low carbon future in Asia and the Pacific: Regional Trends Report on Energy for Sustainable Development 2025. Available at: https://repository.unescap.org/server/api/core/bitstreams/814d1f10-e8d7-45df-98f2-8b1f3d8eb57d/content

[6] ESCAP (2025) Review of Climate Ambition in Asia and the Pacific: Readiness for NDC Implementation. Available at: https://repository.unescap.org/items/2cf11e71-5cb0-47a6-8ef1-0d40f63f7297

[7] ESCAP (2025) Asia-Pacific Trade and Investment Trends 2025/2026: Foreign Direct Investment. Available at: https://www.unescap.org/kp/2025/foreign-direct-investment-trends-and-outlook-asia-and-pacific-20252026

Underpinning this work is a commitment to integrated approaches that recognize the interdependence of policy, finance and implementation in delivering low-carbon and resilient transitions, in line with global commitments such as the COP28 outcomes on renewable energy and energy efficiency. In the transport sector, ESCAP supports member States in establishing complete electric mobility ecosystems under the Asia Pacific Initiative on Electric Mobility (APIEM). Capacity gaps across policy, regulatory, financial and informational dimensions are addressed through technical cooperation that prioritizes strengthening policy and regulatory frameworks, improving planning and implementation readiness and facilitating regional knowledge-sharing and cooperation mechanisms.

The following success stories bring these efforts into focus. Spanning energy finance, electric mobility and investment frameworks, they demonstrate how ESCAP's technical cooperation translates regional priorities into tangible results, from strengthened institutions and reformed policies to investment-ready projects. Together, they reflect a vision of Asia and the Pacific not merely adapting to the demands of a low-carbon future, but actively shaping it.

Insights from our partners



SOUPHANY HEUANGKEO

Deputy Director, Division of Road Passenger Transport, Department of Transport, Ministry of Public Works and Transport, Lao PDR



Bridging the Climate Finance Gap:

Building Sustainable Financial Systems Across the Asia-Pacific Region

Partners:

Mongolia: Ministry of Economy and Development; Bank of Mongolia; Mongolian Sustainable Finance Association

Cambodia: Securities and Exchange Regulator of Cambodia; National Bank of Cambodia

Thailand: National Innovation Agency

Tajikistan: Agency for Securities Market Development and Specialized Registration, Ministry of Finance; Luxembourg Green Exchange

Indonesia: Ministry of Finance; PLN (state electricity company); SMI (state infrastructure company)

Philippines: Department of Finance; Department of Energy; Central Bank (BSP); BDO Unibank Inc.

Viet Nam: Ministry of Finance; Ministry of Industry and Trade; Power Engineering Consulting Company 2 (PECC2)

Objective:

To strengthen climate-aligned financial systems in the Asia-Pacific region by developing bankable investment pipelines, integrating climate risk into central banking and enabling green bond and energy transition finance.

Period

2023-2025

Target Countries:

Bhutan, Cambodia, Indonesia, Mongolia, the Philippines, Tajikistan, Thailand, Viet Nam

Funding Source:

- Government of China
- NDC Partnership Action Fund
- United Nations Regular Programme of Technical Cooperation

The race to finance climate action in Asia and the Pacific is running up against a formidable barrier. The region faces a substantial and persistent climate finance challenge, set against a global financing gap of US$2.5 to 4 trillion for developing countries.[8] While the Asia-Pacific region attracts more than half of global climate finance flows, much of this capital is concentrated in a few large economies. For many countries, access to affordable, long-term funding for climate mitigation, adaptation and sustainable development remains out of reach. Shallow financial markets, limited capital depth and emerging sustainable finance ecosystems further slow progress. Without practical, tailored solutions, countries risk falling behind in the transition to climate-aligned economies.

[8] ESCAP. A Call to Action: Developing Sustainable Capital Markets, Financing Energy Transitions, and Building Project Pipelines. 2025. https://repository.unescap.org/server/api/core/bitstreams/657d54fb-e735-4456-935f-3ac187c87ee0/content

To change this trajectory, ESCAP launched a multi-component initiative that brought together policy reform, technical expertise and hands-on capacity-building across the region. In Cambodia, Mongolia and Thailand, ESCAP worked closely with ministries, regulators and financial institutions to develop pipelines of bankable green investments. Cambodia finalized its National Sustainable Finance Roadmap, creating a coordinated path forward for regulators and the private sector. In Mongolia, collaboration with the central bank broke new ground: climate risks were integrated into monetary policy and supervision, resulting in the country's first Climate Disclosure Guideline, an environmental, social, and governance (ESG) supervision framework and a comprehensive climate scenario analysis across systemically important banks.

Across Indonesia, Viet Nam, the Philippines and Tajikistan, the focus turned to mobilizing capital markets. Tajikistan initiated its first green bond framework, marking a milestone in its sustainable finance journey, while regional knowledge exchange with Astana International Financial Centre (AIFC), International Financing Cooperation (IFC) and the Luxembourg Green Exchange (LGX) strengthened market readiness and investor confidence.

The results are tangible and region-shaping. Cambodia established an annual Investor Roundtable to catalyse climate investment. Mongolia became the first landlocked developing country to complete a banking sector climate scenario analysis and formally adopt national climate disclosure guidance. Thailand advanced policies to scale climate-tech finance. Indonesia, Viet Nam and the Philippines strengthened their technical capacity to finance the energy transition. Gender inclusion was embedded throughout, with women representing more than 87 per cent of participants in some workshops, demonstrating that climate finance progress and inclusive participation can go hand in hand.

> *In close partnership with ESCAP and development partners, the Securities and Exchange Regulator of Cambodia (SERC) is translating recommendations into coordinated action to strengthen green market infrastructure, improve access to finance and promote investment aligned with Cambodia's climate priorities.*
>
> **H.E. Sou Socheat**
> Director General of the Securities and Exchange Regulator of Cambodia (SERC)

This partnership is helping turn climate ambition into concrete action, by unlocking capital, strengthening financial systems and accelerating progress across Asia and the Pacific. With stronger policies, investment pipelines and green finance readiness in place, countries are building more resilient, inclusive economies equipped to meet the scale of the climate challenge.

Read more:

A Region of Solutions: Financing innovation for climate action Financing innovation for climate action

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Inclusive Business for Impact:

Transforming Agriculture and Food Systems in Asia

Partners:

Invest India; Office of SMEs Promotion (Thailand); Agency for Enterprise Development, Ministry of Finance (Viet Nam); FTU Innovation and Incubation Space (Viet Nam); Bill & Melinda Gates Foundation; Ecociate; Intellecap; Endeva

Objective:

To promote inclusive business models in agriculture and food systems across Asia, integrating smallholder farmers into value chains, strengthening gender-responsive practices, and building sustainable ecosystems for investment, policy, and knowledge exchange.

Period

2021-2024

Target Countries:

India, Thailand, Viet Nam

Funding Source:

Bill & Melinda Gates Foundation

Across Asia, the future of food security and rural livelihoods rests heavily on agriculture, yet smallholder farmers are too often left on the margins. Many face exclusion from value chains, limited access to markets, finance and technology as well as persistent gender inequalities. Traditional business models continue to leave these communities behind, perpetuating poverty and constraining sustainable growth. Inclusive business (IB) models – commercially viable enterprises that integrate low-income communities into production, processing and marketing – offer a pathway to more equitable and resilient agricultural systems. However, adoption has been slow due to gaps in awareness, policies and investment readiness.

To address these challenges, ESCAP partnered with the Bill & Melinda Gates Foundation, national agencies and specialized partners to pilot and scale IB promotion across India, Thailand and Viet Nam. The initiative combined policy support, capacity-building, investment facilitation and regional knowledge exchange. It helped develop IB accreditation systems and policy roadmaps, supported ASEAN endorsement of the Model Framework for Inclusive Business Accreditation and delivered training to 30 agribusinesses, enabling them to design inclusive models and integrate gender strategies.

Investment facilitation connected businesses with investors through forums, matchmaking sessions and dialogue platforms, mobilizing substantial private capital. Eleven publications were produced, including toolkits, accreditation manuals and return-on-investment analyses, while ASEAN IB summits and a dedicated LinkedIn page reached 35,000 users, fostering cross-border learning.

Significant milestones were achieved: Telangana integrated IB into its Micro, Small, and Medium Enterprises (MSME) Policy 2024; Thailand approved the ASEAN Plan of Action for Inclusive Business; Viet Nam launched its first IB accreditation system; and ASEAN endorsed the Model Framework for Inclusive Business Accreditation. Twenty-seven agribusinesses developed inclusive models, reaching 18,726 smallholder farmers – over half of them women – and catalysing higher levels of private sector co-investment.

> *With the important technical support from ESCAP in evidence-based research, policy studies and peer learning, Viet Nam has achieved many important milestones. Our national programme on promoting inclusive business now shows the highest level of government commitment.*
>
> **Trinh Thi Huong**
> Deputy Director General, Agency for the Development of Private Enterprises and Collective Economy (APED), Ministry of Finance, Viet Nam

Inclusive business is proving that commercial success and social impact can advance together. With stronger policies, accredited enterprises and mobilized investment, smallholder farmers are more firmly connected to markets and opportunity. Progress across India, Thailand and Viet Nam shows that when governments, businesses and investors act together, agricultural value chains become more resilient, inclusive and positioned to support sustainable growth across Asia.

Read more:

ESCAP Inclusive Business LinkedIn Page

Promoting Inclusive Business in Asia and the Pacific Project Webpage

- Guidelines for Promoting Inclusive Business in ASEAN
- Model Framework for an Inclusive Business Accreditation System in ASEAN
- Capacity Building and Talent Development Framework for Inclusive Business in ASEAN

A region of solutions: Beyond Profit: The impact of inclusive business practice

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Converting Green and Digital Ambition into Investment-Ready Projects Across Central Asia, the Pacific and ASEAN



Partners:

Investment Promotion Agencies of Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan; Tuvalu Business and Investment Department; Investment Promotion Division, Ministry of Tourism, Commerce, Industry and Cooperatives (Kiribati); Investment Fiji; International Islamic Trade Finance Corporation; Islamic Development Bank; Gobi Partners; Global Innovation and Digital Entrepreneurship Hub (GUIDE); ASEAN Secretariat; ASEAN Coordinating Committee on Investment; ASEAN Investment Promotion Agencies

Objective:

To close the investment execution gap across Central Asia, Pacific Least Developed Countries (LDCs) and ASEAN by strengthening institutional capacity, developing investor-ready green and digital project pipelines, and coordinating regional investment promotion to mobilize private capital for sustainable development.

Period

2024-2026

Target Countries:

Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Kiribati, Tuvalu, all ASEAN Member States

Funding Source:

- Government of the United Kingdom
- Enhanced Integrated Framework
- International Islamic Trade Finance Corporation
- United Nations Regular Programme of Technical Cooperation

Ambitious green and digital strategies are taking shape across Central Asia, Pacific small island developing States and least developed countries (LDCs), and ASEAN, but turning these visions into a steady pipeline of bankable, investor-ready projects remains a persistent challenge. Across these regions, governments share the task of converting policy ambition into practical investment opportunities. In Central Asia, greenfield foreign direct investment (FDI) – which involves foreign firms establishing new operations from the ground up – remains concentrated in extractive industries such as oil, gas and mining. This narrows opportunities to diversify exports, create quality jobs and generate greater value within local economies.

Meanwhile, in Pacific LDCs, small domestic markets and limited institutional bandwidth constrain project packaging and sustained investor outreach. Within ASEAN, climate investment is growing but uneven, and many investment promotion agencies (IPAs) need practical tools to identify, develop and coordinate investor-ready projects under the Regional Investment Promotion Action Plan (RIPAP).

To address these execution gaps, ESCAP applied a practical, results-focused approach: identify priority sectors aligned with national strategies; strengthen the hands-on capacity of investment institutions; develop clear, investor-ready project documentation; and coordinate outreach to investors at both national and regional levels.

In Central Asia, national FDI-for-trade action plans aligned investment promotion with export-linked sectors such as logistics, warehousing and agricultural processing. The Central Asia+ Accelerator, delivered with Gobi Partners and GUIDE, supported 24 digital firms from five countries to become more investment-ready, sharpen their export strategies and connect with regional and global markets. As a result, 85 per cent of participating firms reported improved readiness to engage investors, while 92 per cent confirmed the programme's relevance to their export ambitions.

In the Pacific, a hub-and-spoke model anchored by Investment Fiji enabled Tuvalu and Kiribati to "borrow scale" from a stronger regional platform. Country assessments identified priority sectors – which were fisheries and digital services in Tuvalu, and coconut and seaweed value chains in Kiribati – followed by practical training for IPAs on investor outreach, project presentation and ongoing investor support. Four fully developed, investor-ready project packages (two per country) were produced, alongside a Best Practices Manual to help standardize processes and reduce disruption from staff turnover.



From framework to action: RIPAP focal points, ASEAN Secretariat, and ESCAP working together to translate regional ambition into investment ready outcomes, Jakarta, Indonesia, 17 December 2025.

In ASEAN, the ASEAN Green Investment Catalyst moved RIPAP from a policy framework to practical implementation. Six regional workshops strengthened IPA skills; RIPAP key performance indicators were put in place for ASEAN-wide tracking; and five green investment-ready projects were prepared across three member States. Two have already attracted formal investor expressions of interest. Regional investment forums, strengthened national and ASEAN-wide value propositions, and improved investor mapping tools helped position the region as a coordinated destination for green investment.

> *It's hugely beneficial to have investment-ready project development technical assistance through the ASEAN Green Investment Catalyst (AGIC). It is helping IPAs to guide companies to prepare for investment. Collaboration with ESCAP through AGIC and RIPAP has been instrumental in building institutional capacity, not just in vetting and packaging investment-ready projects, but in FDI attraction more broadly.*

Lanie Dormiendo

Director of International Investments at the Board of Investments of the Philippines

By shifting from promotion to well-prepared projects, and from isolated national efforts to coordinated regional models, this partnership is turning strategy into concrete opportunities, mobilizing private capital to advance green, digital and trade-led transformation across three diverse subregions.

Read more:

Futureproofing FDI in Asia and the Pacific: Navigating business not as usual

A Region of Solutions: Driving sustainability: The FDI advantage

Contact:

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Sowing Sustainability:

Advancing Agroecology Transitions in ASEAN



Partners:

Lao-facilitated Initiative on Agroecology (LICA) led by the Ministry of Agriculture and Environment of Lao PDR; French Agricultural Research Centre for International Development (CIRAD); Group for Research and Technology Exchanges (GRET); ASEAN Secretariat; Food and Agriculture Organization of the United Nations (FAO)

Objective:

To advance agroecology transitions in South-East Asia by strengthening regional policy frameworks, institutional coordination, and capacity for sustainable, resilient, and safe food systems.

Period

2020-2025

Target Countries:

ASEAN Member States

Funding Source:

Government of France

The future of South-East Asia's food systems is under mounting pressure. Agrifood systems across the region face escalating challenges from environmental degradation, climate change and food safety risks. Long-standing reliance on input-intensive agricultural practices, including synthetic fertilizers and pesticides, has contributed to declining soil health and biodiversity loss. At the same time, climate variability continues to threaten the livelihoods of farmers, who account for nearly one-third of the region's population. Agroecology offers a sustainable alternative, combining crop diversification, organic practices and agroforestry to restore ecosystems, strengthen resilience and ensure safe food production. However, despite growing national initiatives, limited regional policy coherence has constrained its broader adoption across ASEAN.

To address this, ESCAP partnered with CIRAD (French Agricultural Research Centre for International Development), Food and Agriculture Organization of the United Nations (FAO), the ASEAN Secretariat, and Lao-facilitated Initiative on Agroecology (LICA) under the Agroecology and Safe Food System Transition (ASSET) project, supported by the European Union and the Government of France. ESCAP led the regional policy component, supporting a structured and consultative process to advance agroecology as an ASEAN priority. Policymakers, researchers, farmers' organizations, civil society, development partners, and private sector actors were engaged to co-develop the ASEAN Policy Guidelines on Agroecology Transitions, translating national experiences into a shared set of policy principles, implementation pathways, and supporting case studies.

> *"The project helped bring countries and stakeholders together, strengthening regional cooperation and giving us a solid platform to advance agroecology across ASEAN."*
>
> **Thatheva Saphangthong**
> LICA Lead of Lao PDR

The project reached a significant milestone in 2024, with the formal endorsement of the Guidelines by ASEAN Senior Officials and Ministers of Agriculture and Forestry, establishing the first regionally agreed policy framework on agroecology. ESCAP contributed technical inputs to ASEAN working groups and supported discussions under the ASEAN Food, Agriculture and Forestry Sectoral Plan 2026–2030, embedding agroecology within post-2025 regional strategies. The initiative also informed national action planning processes in Lao PDR and Viet Nam, where agroecology-related policies and strategies have expanded in recent years. Institutional sustainability was strengthened through support to LICA, formally recognized as ASEAN's reference group on agroecology, with its Strategic Action Plan for 2026–2030 adopted in 2025.

Agroecology is gaining ground as a shared regional priority rather than a collection of isolated national efforts. With ASEAN's first regionally endorsed Policy Guidelines now in place, stronger institutional leadership through LICA and growing integration into national action plans, South-East Asia has a clearer and more coordinated path toward sustainable agrifood systems. By aligning regional policy guidance with national implementation and institutional anchoring, the project has established a durable foundation for advancing sustainable and resilient agrifood systems across ASEAN.



Participants of the 47th ASEAN Ministers on Agriculture and Forestry Meeting, Pasay City, Philippines, 1 October 2025.

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Driving Change:

Electric Mobility for Cleaner, Greener Public Transport in the Asia-Pacific Region



Partners:

Local and city governments, and national ministries responsible for transport, energy, and environment in Lao PDR, the Philippines, Sri Lanka, and Tajikistan

Objective:

To accelerate the transition to electric public transport systems by strengthening institutional frameworks, mobilizing finance, and advancing pilot electric bus deployment across selected Asia-Pacific countries.

Period

2024-2026

Target Countries:

Lao PDR, the Philippines, Sri Lanka, Tajikistan

Funding Source:

Government of China

The road to sustainable development runs straight through the transport sector, and currently it is emissions-heavy. Transport accounts for nearly a quarter of global energy-related CO_2 emissions, and the Asia-Pacific region is home to 93 of the world's 100 most polluted cities. Rapid urbanization and heavy dependence on fossil fuels continue to drive transport emissions up, threatening progress toward the SDGs and the Paris Agreement.

Electrifying public transport fleets offers one of the most cost-effective and immediate pathways to decarbonization, with the potential to significantly reduce greenhouse gas emissions while improving urban air quality. Yet many countries face persistent barriers, including high upfront investment costs, fragmented regulatory frameworks, limited technical expertise and insufficient coordination among public and private stakeholders.

To address these structural challenges, ESCAP launched Phase II of its electric mobility initiative. Building on earlier regional guidebooks and case studies, the new phase shifts from knowledge development to implementation. Working closely with national ministries, city governments, and transport authorities in Lao PDR, the Philippines, Sri Lanka and Tajikistan, the project supports countries in operationalizing electric mobility strategies and preparing pilot electric bus deployments.

A central pillar of the initiative has been the establishment of national coordination mechanisms to guide the transition. Tajikistan, Lao PDR and the Philippines have already launched their institutional platforms, creating formal spaces for cross-ministerial collaboration and stakeholder engagement. In parallel, ESCAP developed tailored financing models and engaged international financial institutions and development partners to unlock viable investment pathways for pilot e-bus projects.

Technical and infrastructure assessments that integrate gender-sensitive analysis were conducted in all four countries to ensure electric mobility deployment is inclusive, sustainable and responsive to local conditions. Recognizing that scaling up requires collective momentum, ESCAP also strengthened the Asia-Pacific Initiative on Electric Mobility (APIEM) as a regional platform for peer learning. This momentum culminated in a dedicated Electric Mobility Week in December 2025, organized in partnership with the Asian Development Bank (ADB), which saw more than 160 participants from 29 countries meet to address financing challenges and develop context-specific solutions.

The impact of the partnership is already visible. APIEM membership expanded from 19 to 22 countries and from 4 to 13 organizations, reinforcing its role as a regional catalyst. Financing strategies for electric bus pilots have been finalized in three of the four target countries, and donors have been identified to finance pilots in two countries (Lao PDR and Tajikistan). With institutional mechanisms in place and feasibility studies completed, the region is moving from ambition to action.

With national coordination platforms established, financing strategies finalized and pilot electric bus projects advancing, countries are building the practical foundations for large-scale transition. The growing reach of APIEM and stronger engagement with development partners signal sustained regional momentum. Together, these efforts are accelerating a systemic shift toward greener, more resilient and more inclusive transport systems.

Contact:

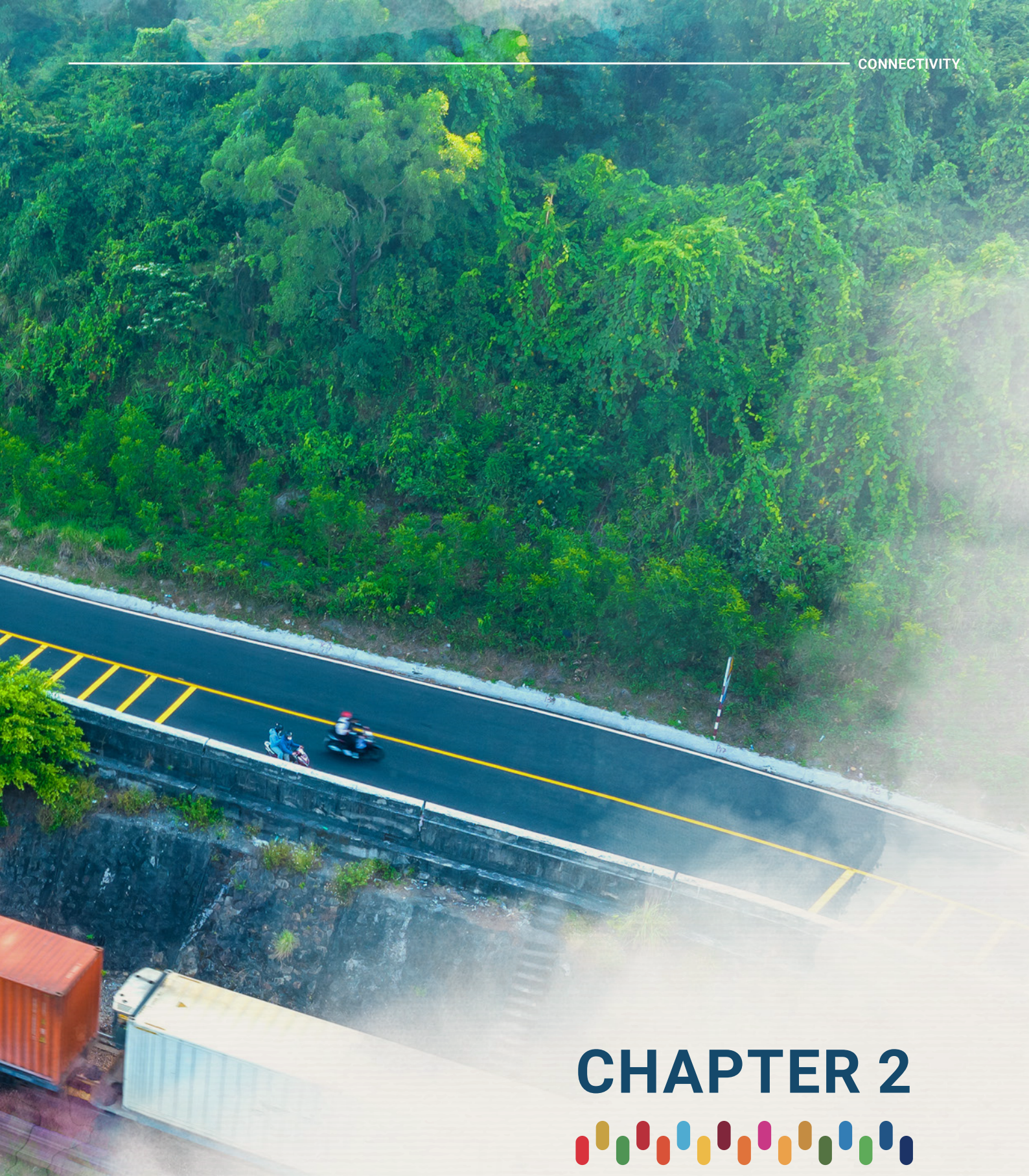
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First electric jeepneys in Iloilo City during a field mission to Western Visayas, Philippines, 18–21 November 2024.





CHAPTER 2

CONNECTIVITY

For many countries in Asia and the Pacific, connectivity is not a technical matter but a development imperative. ESCAP's work on connectivity spans infrastructure (energy, Information and Communication Technology (ICT) and transport) and economic connectivity, enabling the interoperable movement of goods, services, people, data and energy across borders and sectors. Connectivity underpins economic growth, regional integration, service delivery and mobility, particularly for geographically remote and vulnerable countries.[9] For least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing States (SIDS), access to markets, services and opportunities depends heavily on efficient transport networks, affordable digital connectivity and reliable energy systems.

Recent shocks, including the COVID-19 pandemic, climate-related disasters and global supply-chain disruptions, exposed weaknesses in transport corridors, digital access, early warning systems and cross-border trade processes. These disruptions highlighted the vulnerability of fragmented connectivity systems and the importance of resilient, interoperable and well-governed regional networks. Such gaps disproportionately affect rural areas, small traders, micro, small and medium enterprises (MSMEs) and vulnerable communities, reinforcing development disparities within and between countries.[10] Strengthening connectivity is therefore a strategic development priority for Asia and the Pacific, essential for resilient supply chains, inclusive growth and sustainable regional integration.

With a regional mandate, convening power and normative role, ESCAP is able to address cross-border and systemic connectivity challenges that require multilateral solutions. By combining regional normative framework development, policy guidance, capacity-building and targeted implementation support, ESCAP works with member States across the full range of policy and implementation needs. Through its convening role, ESCAP facilitates intergovernmental dialogue, peer learning and trust-building, supporting coordinated infrastructure development and the harmonization of standards, procedures and regulations across borders.

ESCAP's connectivity initiatives are anchored in a comprehensive set of regional frameworks across transport, trade, ICT and energy. In transport, intergovernmental agreements on the Asian Highway Network, the Trans-Asian Railway Network and Dry Ports form the backbone of regional land transport connectivity. In trade, the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific supports digital trade integration and regulatory alignment. In ICT, the Asia-Pacific Information Superhighway platform (APIS) promotes affordable broadband access, digital inclusion and ICT resilience, including in support of disaster risk reduction and early warning systems. In energy, ESCAP supports regional power system connectivity and cross-border electricity trade through implementation of the Regional Road Map on Power System Connectivity.

[9] ESCAP (2025) Urban Transformation in Asia and the Pacific. Available at: https://repository.unescap.org/items/953a64d5-078a-45b3-8ca4-f3611e287cf2

[10] ESCAP (2025) Rising Heat, Rising Risk. Policy Pathways for Regional Resilience. Available at: https://repository.unescap.org/server/api/core/bitstreams/e55f8a9e-2e7a-414e-8e2e-4eb004248335/content?

Capacity gaps across policy and regulatory design, institutional coordination, technical standards, data availability and human resources remain particularly acute for LDCs, LLDCs and SIDS. These are addressed through capacity-building embedded across all connectivity work, including regional workshops, expert group meetings, peer learning platforms, digital tools and modelling support, tailored to diverse country contexts to ensure relevance and long-term ownership.

What follows illustrates how this work takes shape in practice, demonstrating how ESCAP's approach translates regional frameworks into results across transport, trade, ICT and energy systems, delivering more resilient, inclusive and sustainable connectivity outcomes across Asia and the Pacific.

Insights from our partners



SARAI FALEUPOLU TEVITA
Chief Operating Officer of the National University of Samoa



From Paper to Digital:

Driving Trade Facilitation and Regional Integration in the Asia-Pacific Region

Partners:

Ministry of Economy and Finance, Republic of Korea; Korea Customs Service; Electronic Transactions Development Agency, Thailand (ETDA); China Academy of Information and Communications Technology (CAICT); Huazhong University of Science and Technology; Institute for Internet Policy and Law, Beijing Normal University; Asia-Pacific Research and Training Network on Trade (ARTNeT); United Nations Network of Experts for Paperless Trade and Transport in Asia and the Pacific (UNNExT); World Customs Organization; Asian Development Bank; International Trade Centre; International Chamber of Commerce; Central Asia Regional Economic Cooperation Program (CAREC); Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC); Association of Southeast Asian Nations (ASEAN); United Nations Conference on Trade and Development (UNCTAD); United Nations Economic Commission for Europe (UNECE)

Objective:

To reduce trade costs and strengthen regional integration by advancing cross-border paperless trade, digital legal frameworks and implementation of regional trade agreements across the Asia-Pacific region.

Period

2016–2025

Target Countries:

All ESCAP developing member States, with particular focus on landlocked and least developed countries, and special focus on Central Asian economies

Funding Source:

- Government of China
- Government of the Republic of Korea

The Asia-Pacific region accounts for a large share of global trade, yet many countries in the region continue to face high transaction costs, regulatory bottlenecks and limited digital readiness. For some developing economies, trading with neighbouring countries can be as costly as trading with distant markets. While investment in transport corridors and ports has improved physical connectivity, progress on “soft infrastructure”, such as harmonized laws, interoperable digital systems and secure electronic documentation, has been uneven. The COVID-19 pandemic and climate-related disruptions further exposed the weaknesses of paper-based systems, highlighting the need for reliable digital trade solutions.

In response, ESCAP implemented a multi-phase initiative to help countries move from paper-based processes to digital trade systems. The programme focused on implementation of the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific (CPTA) and strengthening regional integration through the Asia-Pacific Trade Agreement (APTA).

Cross-border paperless trade refers to the electronic exchange of trade-related documents between countries, replacing paper forms with secure digital data. A key tool in this transition is the Single Window system, which allows traders to submit all required documents through one online platform instead of multiple agencies.

ESCAP convened intergovernmental meetings, including Paperless Trade Week and Council sessions, to support implementation of CPTA and promote cooperation among member States. Dedicated working groups advanced technical and legal discussions on mutual recognition of electronic trade data – meaning that countries agree to accept each other's digital documents – and on digital trust services that ensure the authenticity and security of electronic transactions.

Capacity-building was central to the initiative. Regional and national workshops, webinars and peer learning forums supported countries in conducting business process analyses, legal gap assessments and digital readiness studies. Practical tools, including legal guides, model memoranda of understanding (MOU) and prioritization methodologies, were developed to help governments implement reforms in a structured way.

Over successive phases, targeted technical assistance supported countries in developing national paperless trade strategies, strengthening Single Window systems and piloting cross-border electronic data exchanges. Online benchmarking and monitoring tools were enhanced to track progress and guide implementation. Outreach activities also promoted wider participation in APTA, reinforcing South-South cooperation and regional integration.

Concrete progress has been achieved across the region. CPTA membership expanded to 15 parties by 2025, strengthening the regional framework for digital trade cooperation. Participating economies reported steady improvements in digital and sustainable trade facilitation measures. Several countries initiated or advanced national digital trade strategies and conducted pilot exchanges of electronic trade data across borders.

Institutional and technical capacity has been strengthened across participating countries, enabling governments to design and implement complex digital reforms. Gender considerations were integrated into assessments and policy support to promote inclusive participation in trade digitalization processes.

Digital trade is becoming a foundation for more resilient and sustainable growth in Asia and the Pacific. Coordinated legal reform, technical assistance and regional cooperation are helping countries cut trade costs, strengthen resilience and advance greener practices. With the potential to reduce an estimated 13 million tons of CO_2 equivalent each year,[11] paperless trade shows how smarter systems can drive competitiveness, sustainability and inclusion across the region.

[11] ESCAP. Unleashing digital trade and investment for sustainable development. 2025. https://www.unescap.org/sites/default/d8files/event-documents/2500094E.pdf

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Navigating the Future:

Advancing Autonomous Shipping for Safer and Cleaner Seas in the Asia-Pacific Region



Partners:

Russian University of Transport (RUT); Center for the Promotion of Autonomous Navigation Technologies (MARINET); World Maritime University (WMU)

Objective:

To modernize maritime transport in the Asia-Pacific region by advancing the adoption of autonomous shipping technologies through policy development, technical research, and regional capacity-building.

Period

2022–2024

Target Countries:

India, Indonesia, Malaysia, Thailand, Viet Nam

Funding Source:

Government of the Russian Federation

The Asia-Pacific region is the heart of global trade, yet its maritime sector is currently weathering a perfect storm of rising trade volumes, safety risks and escalating environmental pressures. While the world moves towards a high-tech future, the region's traditional shipping methods are struggling to keep up with demands for sustainability and efficiency. Autonomous shipping technologies offer a way forward, promising to enhance navigation safety, reduce carbon emissions and streamline logistics. However, for many nations, the barrier to entry remains high; without national strategies, legal frameworks or specialized technical expertise, many countries risk being left behind in the global shift towards smart shipping.

To bridge this technological divide, ESCAP partnered with the Center for the Promotion of Autonomous Navigation Technologies (MARINET), the Russian University of Transport (RUT) and the World Maritime University (WMU). Between July 2022 and June 2024, this partnership embarked on a mission to modernize maritime connectivity across India, Indonesia, Malaysia, Thailand and Viet Nam. The initiative moved beyond simple technical training, adopting a multi-layered strategy that combined rigorous research with high-level policy engagement. By evaluating the technical, legal and social dimensions of autonomous navigation, the initiative established a comprehensive framework for institutional change, encompassing critical port infrastructure requirements and the mainstreaming of gender inclusivity within the maritime workforce.

A major shift from strategy to implementation quickly followed, as the project transitioned from theoretical planning to practical application through the development of national action plans for all five target countries. These plans were reviewed by national experts and integrated directly into policy recommendations. The momentum created by these strategies has sparked tangible action, with India, Indonesia and Viet Nam launching pilot projects, including a landmark partnership with Singapore, to test autonomous technologies in real-world conditions.

Beyond the ships themselves, the project strengthened the "human" network of the region. Through regional expert dialogues and the publication of comprehensive policy reports, the initiative fostered a culture of knowledge-sharing and collective progress. A key achievement was the integration of gender considerations into all technical studies, ensuring that the maritime digital transition promotes equity and inclusivity.

The sustainability of these efforts was further cemented in October 2024 through a Memorandum of Agreement (MOA) with World Maritime University that ensures continued collaboration on maritime innovation. By aligning national goals with regional synergy, the project has ensured that the Asia-Pacific maritime sector is actively navigating toward a safer, greener and more connected future.

Contact:

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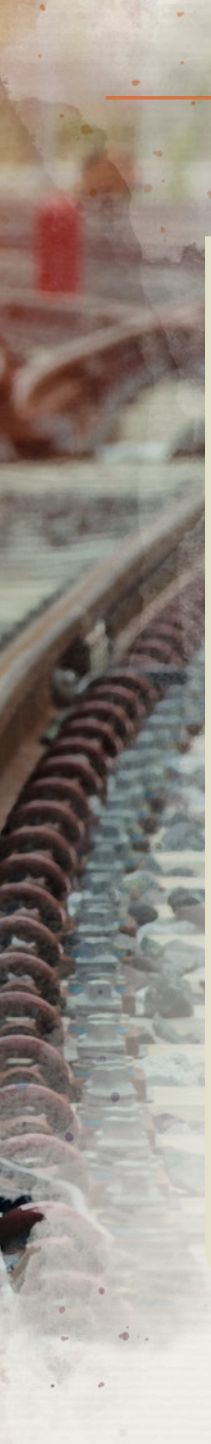
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Connecting Regions:

Advancing Rail Interoperability and Cross-Border Transport Between ASEAN and Central Asia



Partners:

ASEAN; Global Sustainable Transport Innovation and Knowledge Center (GSTIKC); International Transport Forum (ITF); Organization for Cooperation Between Railways (OSJD)

Objective:

To enhance sustainable regional connectivity by harmonizing technical standards, reducing cross-border bottlenecks, and integrating rail networks between South-East Asia and North and Central Asia.

Period

2023–2026

Target Countries:

ASEAN Member States, China, North and Central Asian countries

Funding Source:

Government of China

Asia's freight demand is expected to surge in the coming years, risking a 75 per cent increase in carbon dioxide emissions if transport remains dependent on traditional road-based models. While rail transport offers a more sustainable alternative, in South-East Asia the sector remains fragmented due to inconsistent technical standards and weak cross-border coordination. The operationalization of the Lao PDR–China railway in 2021 presented a historic opportunity to integrate the ASEAN network with the Trans-Asian Railway and extend connectivity into North and Central Asia. However, realizing the full potential of these capital-intensive investments required overcoming significant physical and non-physical barriers, ranging from logistical bottlenecks to a lack of institutional frameworks for international cooperation.

To address these challenges, ESCAP launched a comprehensive initiative supported by the Government of China and a diverse coalition of partners including the ASEAN Secretariat and global railway agencies. The project adopted a two-pronged strategy: strengthening rail coordination within ASEAN and enhancing vital linkages between South-East Asia and North and Central Asia. This approach combined analytical research with high-level capacity-building, leveraging global expertise from the European Union Agency for Railways and the International Transport Forum. By conducting comparative assessments of national rail plans and developing guidelines for high-speed rail, the initiative provided a technical foundation for a more unified regional network.

A defining milestone was reached in November 2025, when the 31st ASEAN Transport Ministers Meeting formally adopted the Strategic Plan on Enhancing Rail Interoperability among ASEAN Member States. This plan serves as a primary blueprint for regional rail integration. Furthermore, a new roadmap for South-East Asia–North and Central Asia connectivity received strong regional support, leading to the adoption of a regional railway standards connectivity scheme by the Working Group on the Trans-Asian Railway. These strategic documents are now guiding the harmonization of standards across the region, ensuring that rail can compete effectively with other modes of transport.

Beyond policy frameworks, the project has invested heavily in the region's human and digital capital. More than 100 experts have engaged in specialized training and dialogues, utilizing new e-learning modules that integrate gender-responsive transport planning. To support long-term operational efficiency, the project contributed to further development of an online Geographic Information System (GIS)-based database of rail networks and border crossings, providing stakeholders with essential data. Regional rail integration is no longer a distant ambition but a coordinated process backed by agreed standards, shared roadmaps and strengthened expertise.

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solo
the spirit of java



Connected Communities:

Bridging Digital and Transport Gaps for Resilient Rural Futures



Partners:

Ministries responsible for information and communications technology and transport in Bangladesh, Lao PDR and Samoa

Objective:

To reduce rural inequality and enhance resilience by strengthening government capacity to develop integrated, cross-sectoral strategies for digital and transport connectivity.

Period

2022–2025

Target Countries:

Bangladesh, Lao PDR, Samoa

Funding Source:

United Nations Development Account

For rural communities in Bangladesh, Lao PDR and Samoa, limited digital access and weak transport links are daily barriers to opportunity. These gaps restrict access to markets, education, healthcare and government services, reinforcing cycles of exclusion. The COVID-19 pandemic made these vulnerabilities impossible to ignore, disrupting supply chains and shifting essential services online, often beyond the reach of rural populations. Women, children and persons with disabilities have been disproportionately affected, widening existing inequalities and reducing communities' capacity to withstand future shocks. Although national development efforts are ongoing, digital and transport strategies frequently operate in silos, lacking the integrated frameworks needed to address the interconnected realities of rural life.

To tackle this fragmentation, ESCAP launched a dedicated multi-country initiative. Working closely with the Ministries of ICT and Transport in all three countries, the project aimed to strengthen institutional capacity to design innovative, integrated connectivity solutions. Six national analytical studies, three focused on digital infrastructure and three on transport systems, examined policy environments, infrastructure gaps and opportunities for cross-sectoral alignment.

National workshops created a rare platform for structured dialogue between ICT and transport authorities, helping break down institutional barriers and build shared ownership of reform priorities. The process led to the development of actionable strategies emphasizing vertical transport connectivity, inclusive digital access and crisis-resilient infrastructure. Lao PDR finalized and published its ICT strategy in 2024, and the strategies of Bangladesh, Lao PDR and Samoa were later released as an ESCAP working paper, offering a practical model for other countries seeking integrated approaches.

Capacity-building and knowledge exchange reinforced these reforms. A study tour to the Digital Competency Centre in the Republic of Korea fostered South-South cooperation and allowed officials to observe advanced digital and physical integration in practice. Regional dialogues strengthened peer learning, encouraged policy harmonization and promoted closer coordination between sectors.



Regional workshop on Digital and Transport Connectivity, Phuket, Thailand, 8 August 2025.

The results extend beyond policy documents. Stronger coordination between digital and transport planning is already reshaping how connectivity is understood as a mutually reinforcing system that expands access to opportunity. When planned together, roads and broadband become pathways to resilience, inclusion and economic participation. The experience offers a compelling lesson for the region: integrated connectivity is not only more efficient, it is transformative, laying the foundation for rural communities to thrive in an increasingly interconnected world.

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Powering the Future:

Building Grid Readiness for Asia-Pacific's Energy Transition

Partners:

ASEAN Centre for Energy (ACE); Sustainable Energy for All; Green Grids Initiative (GGI)

Objective:

To accelerate the transition to sustainable energy by developing a standardized framework to assess grid readiness, increasing investment awareness, and fostering regional consensus on grid modernization.

Period

2024–2025

Target Countries:

Australia, Cambodia, Indonesia, Japan, Kazakhstan, Lao PDR, the Philippines, Republic of Korea, Singapore, Tajikistan, Thailand

Funding Source:

European Climate Foundation (ECF)

The global energy transition will be largely determined by progress in Asia and the Pacific. The region accounts for more than half of global carbon dioxide emissions, with nearly 70 per cent of its electricity still generated from fossil fuels. Although renewable energy deployment is accelerating across many economies, integration into national power systems remains constrained by inadequate grid capacity, limited system flexibility and weak resilience.

Ageing infrastructure, lengthy permitting processes and fragmented regulatory frameworks further slow modernization efforts. Achieving net-zero targets will require annual grid investments of around US$680 billion by 2030, alongside stronger planning systems, regulatory reform and accelerated digitalization. Yet many countries still lack standardized strategies and measurable indicators to assess grid readiness, creating a critical bottleneck in scaling up clean energy.

In response, ESCAP implemented a multi-dimensional strategy working in partnership with the Green Grids Initiative (GGI), the ASEAN Centre for Energy (ACE) and the Electric Power Council of the Commonwealth of Independent States, with support from the European Climate Foundation (ECF). In the lead-up to COP29 in November 2024, high-level consultations were convened with 13 countries to raise awareness of global pledges on power grids and energy storage. These consultations gathered detailed feedback on national grid targets, financing adequacy, digitalization priorities and regulatory gaps, while strengthening alignment between domestic energy plans and international climate commitments.

Central to the initiative was the development of a comprehensive assessment methodology to measure "grid health." The framework applies standardized indicators, including renewable energy integration timelines, interconnectivity levels, system efficiency, permitting duration and carbon intensity, to establish a clear, data-driven baseline. Baseline readiness assessments were completed for 11 target countries, providing policymakers and utilities with practical diagnostics to identify infrastructure weaknesses and prioritize investment needs. The consolidated findings, scheduled for public release in 2025, offer one of the region's first comparative snapshots of grid preparedness for large-scale renewable integration.

Regional consensus on grid modernization has strengthened considerably. Knowledge products and targeted communications have elevated grid issues within energy dialogues, reinforcing the understanding that infrastructure expansion must be matched by regulatory and operational reform. Stronger, smarter grids are increasingly recognized as the backbone of the clean energy transition. With shared methodologies, improved data coordination and sustained regional cooperation, countries now have clearer benchmarks to modernize power systems, accelerate renewable deployment and advance toward a more resilient, decarbonized energy future.

Read more:

Powering South Asia's clean energy transition

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Driving Digital Transformation:

Building Skills for Inclusive Growth and Climate Resilience

Partners:

Geo-Informatics and Space Technology Development Agency (GISTDA), Thailand; National Institute for Environmental Studies (NIES), Japan; Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP); Coalition for Disaster Resilient Infrastructure (CDRI); Pacific Community (SPC); Multi-GNSS Asia (MGA); GSMA; APNIC Foundation; Internet Society (ISOC); Pacific Islands Internet Exchange Point Incorporated (PIXP); Korean Federation of Community Credit Cooperatives (KFCC); International Telecommunication Union (ITU); UN Climate Technology Centre & Network (CTCN)

Objective:

To bridge the digital divide, promote digital transformation and enhance climate resilience by strengthening national capacities in digital technology and data use early warning systems, geospatial technologies, artificial intelligence applications, and resilient digital infrastructure.

Period

2025

Target Countries:

Bangladesh, Bhutan, Cambodia, Fiji, India, Indonesia, Kazakhstan, Kiribati, Kyrgyzstan, Lao PDR, Maldives, Mongolia, Nepal, Pakistan, Samoa, Sri Lanka, Tajikistan, Thailand, Tonga, Uzbekistan, and other countries in South and South-West Asia, Central Asia, and the Pacific

Funding Source:

United Nations Regular Programme of Technical Cooperation

Asia and the Pacific is the most disaster-affected region in the world, accounting for 60 per cent of global disaster-related deaths since 1970. As climate change intensifies environmental hazards, small island developing States and landlocked developing countries face the most acute risks, including irreversible losses to livelihoods and biodiversity. While early warning systems are proven life-saving tools, one-third of the global population remains uncovered by such systems, primarily in countries in special situations. This vulnerability is compounded by the fact that the region remains significantly divided in its access to the digital tools and data required for modern climate adaptation. Without intervention, this digital gap limits the ability of the most vulnerable communities to anticipate and recover from increasingly frequent climate shocks.

To address these intersecting challenges, ESCAP deployed a comprehensive technical assistance programme throughout 2025 to harness digital innovation for transformative climate adaptation. The initiative focused on operationalizing the ESCAP Risk and Resilience Portal, providing disaster management authorities across South Asia, Central Asia and the Third Pole region with the resources to implement impact-based forecasting. By connecting risk information to specific decision thresholds, the project has ensured that national meteorological services can provide actionable data that informs immediate response planning. This technical foundation was further strengthened by a dedicated focus on the next generation of leaders, supporting early-career professionals through specialized fellowships in Geographic Information Systems (GIS), remote sensing and space technology applications.

The initiative's influence extends beyond technical systems into governance and infrastructure resilience. In Cambodia and Pakistan, national workshops improved institutional readiness for responsible innovation, assisting policymakers in designing artificial intelligence applications and digital data frameworks aligned with sustainable development goals. Meanwhile, in the Pacific, the project provided critical advisory services to improve internet traffic management. By supporting the operational steps towards a national Internet Exchange Point in Fiji and Samoa by building regional capacity New Zealand, the initiative has improved routing resilience and reduced latency for time-critical information during emergencies.

Together, these interventions underscore that digital innovation is a critical lifeline for climate-vulnerable nations. By investing in young professionals and fostering South-South and triangular cooperation through platforms such as the Asia-Pacific Information Superhighway platform, ESCAP has multiplied the impact of regional expertise and cooperation. These efforts have established a robust pipeline of skills and infrastructure that allows member States to move beyond reactive disaster management towards a proactive, evidence-based and digitally inclusive future.

Read more:

- Asia-Pacific Risk and Resilience Portal
- Asia-Pacific Information Superhighway



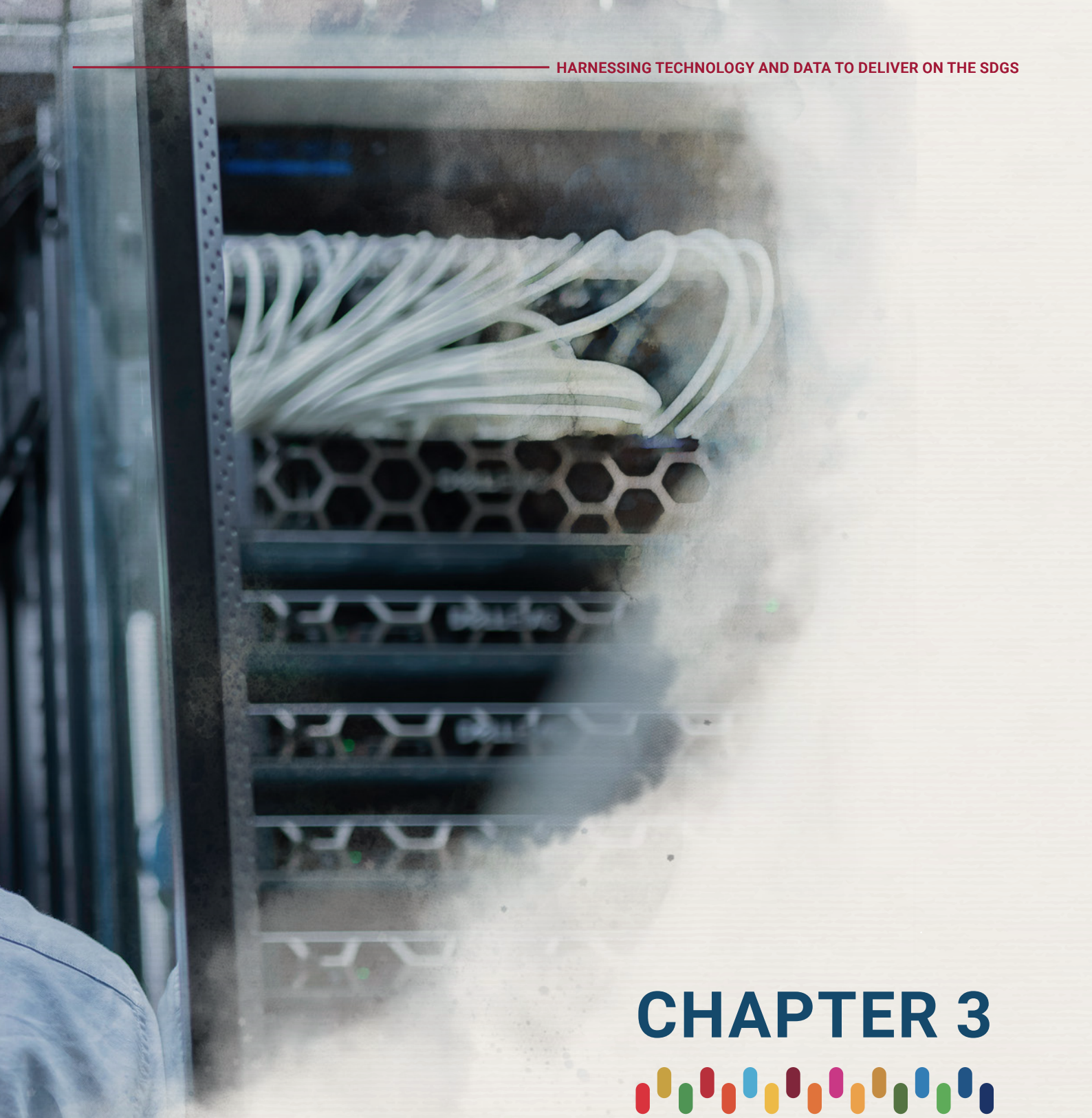
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CHAPTER 3

HARNESSING TECHNOLOGY AND DATA TO DELIVER ON THE SDGS

Across Asia and the Pacific, progress on the Sustainable Development Goals (SDGs) increasingly depends on how effectively countries can produce, govern, share and use data, and apply digital and geospatial technologies to strengthen policymaking, service delivery and risk management. ESCAP approaches technology and data as an integrated ecosystem, supported by enabling policies and institutions, reflecting the reality that SDG implementation requires evidence that is timely, interoperable and usable across sectors and levels of government.

Rapid digital transformation is reshaping the region, with new opportunities emerging from growing volumes of satellite and geospatial data and digital innovation. At the same time, climate change and natural disasters remain significant challenges, and data gaps continue to hinder effective monitoring and response. Geospatial information and space applications can support decision-making across sectors, including disaster risk reduction, climate action and natural resource management, provided data are more available, accessible, affordable and actionable. ESCAP has also emphasized the risk of a "frontier technology divide" and the importance of building trust and governance for data and technology use so that innovation supports inclusive development outcomes. Strengthening technology and data ecosystems is therefore a strategic priority, particularly for countries facing structural constraints and capacity gaps that limit access to timely data and digital tools needed for SDG planning and reporting.

ESCAP's work extends from policy development through to implementation, combining regional frameworks, analytical products, technical assistance and capacity development anchored in several regional mechanisms. The Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018-2030)[12] provides a regionally coordinated blueprint to harness space and geospatial applications in support of the 2030 Agenda. The Asia-Pacific Information Superhighway (APIS) Action Plan (2022-2026)[13] provides a regional framework to bridge the digital divide and accelerate digital transformation through coordinated action on connectivity, digital technologies and data. On data governance, ESCAP offers a structured framework [14] organized around vision, rules and institutions, stewardship, accessibility and risk mitigation, helping countries enhance the value of data assets while managing risks and strengthening trust.

The Asia-Pacific Risk and Resilience Portal strengthens risk analysis and interoperability by integrating multi-hazard and climate risk information into a single digital platform, enabling risk-informed planning and preparedness across borders. The Asian and Pacific Training Centre for Information and Communication Technology for Development further builds human and institutional capacities through programmes on digital transformation, Artificial Intelligence (AI) and data governance, including dedicated initiatives to promote inclusive digital transformation among women entrepreneurs.

[12] ESCAP (2019) Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018-2030). Available at: https://repository.unescap.org/items/0e52b90d-af74-488a-9f24-468ae42ee67c

[13] ESCAP (2022) Action Plan for Implementation of the Asia-Pacific Information Superhighway (2022-2026). Available at: https://www.unescap.org/sites/default/d8files/event-documents/AP-IS%20Action%20Plan%202022-2026_Final.pdf

[14] ESCAP (2024) Data Governance. Practices in Asia and the Pacific. Available at: https://repository.unescap.org/server/api/core/bitstreams/0c7f3bb4-9c36-48d6-87c2-86eedba6d1e6/content

Many member States face persistent capacity gaps across policy and regulatory frameworks, institutional coordination, technical skills and data infrastructure.[15] These are addressed through capacity development across four dimensions: policy and regulatory capacity; institutional coordination and governance; [16] human capacity through training and peer learning; and analytical and data capacity through modernized statistical systems and improved evidence tools, tailored to diverse country contexts.[17]

The success stories in this chapter illustrate how this approach strengthens technology and data ecosystems in practice, supporting countries to move from frameworks to implementation and translate data into tangible contributions to SDG delivery.

Insights from our partners



SHAHID UDDIN AKBAR
Chief Executive Officer (CEO)
Bangladesh Institute of ICT in Development (BIID) Foundation

[15] ESCAP (2017) Artificial Intelligence in Asia and the Pacific. Available at: https://repository.unescap.org/server/api/core/bitstreams/7ef6d305-d281-43c5-b13c-7d26254d7b2c/content

[16] ESCAP (2024) Data Governance. Practices in Asia and the Pacific. Available at: https://repository.unescap.org/server/api/core/bitstreams/0c7f3bb4-9c36-48d6-87c2-86eedba6d1e6/content

[17] ESCAP (2024). Geospatial Practices for Sustainable development in East and North-East Asia 2024. A Compendium. Available at: https://repository.unescap.org/server/api/core/bitstreams/fc3634ea-8e18-4e05-881f-15a28afacde8/content



Smart and Strong:

Empowering Small Ports for Digital Transformation and Climate Resilience



Partners:

Korea Ports and Harbours Association (KPHA); Pacific Community (SPC)

Objective:

To strengthen the digital capabilities and climate resilience of small ports across Asia and the Pacific through applied research, policy guidance and targeted capacity building.

Partnership Period

2024-2025

Target Countries:

- Digitalization – Kiribati, the Philippines, Solomon Islands, Sri Lanka
- Resilience – Fiji, Indonesia, Maldives, Papua New Guinea

Funding Source:

Korea Ports and Harbours Association (KPHA)

Small ports handling less than 10 million tons of cargo annually play an outsized role in sustaining trade, tourism and the delivery of food and fuel. For many small island developing States and archipelagic countries, they are economic lifelines, linking remote communities to national, regional and global markets and ensuring the steady flow of essential goods.

As maritime transport undergoes rapid digital transformation, however, many small ports risk being left behind. Major hubs are deploying advanced data systems and automated operations, while smaller facilities often face limited financial resources, ageing infrastructure and gaps in technical expertise. Manual processes constrain efficiency, transparency and competitiveness. At the same time, rising sea levels, extreme rainfall and stronger storms are increasing the risk of infrastructure damage and service disruption. Without targeted support, gaps in digital capacity and climate resilience will widen, threatening economic stability and community wellbeing.

To address these challenges, ESCAP partnered with the Korea Ports and Harbours Association (KPHA) and the Pacific Community. The initiative pursued a dual focus on digitalization and climate resilience, recognizing that modernization and disaster preparedness must advance together. Research identified affordable technologies suited to small ports, including artificial intelligence applications, Internet of Things sensors to monitor equipment and cargo, and practical tools such as QR codes, mobile applications and web-based management systems. It also assessed climate-related disaster risks, reviewed infrastructure design standards and analysed regional case studies to identify adaptable resilience measures.

Two draft study reports were prepared to guide policy reform and investment: one on bridging the digitalization gap and another on strengthening resilience. Capacity-building formed a core component of the partnership. Workshops held in Busan in December 2024 and 2025 brought together more than 120 participants from 19 countries to exchange experience on digital trends, disaster preparedness and international cooperation, while promoting women's participation in maritime planning and technology adoption.

Though smaller in scale than major container hubs, these ports are indispensable to the communities they serve. Strengthening digital systems and climate resilience is not simply a technical upgrade; it safeguards supply chains, protects livelihoods and reinforces the foundations of sustainable growth in vulnerable coastal and island economies.

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Mapping the Future:

Building Asia-Pacific Region's Networked Geospatial Data Hub for Sustainable Development

Partners:

National Geographic Information Institute (NGII); UN Global Geospatial Information Management (UN-GGIM); United Nations Global Service Centre (UN GSC)

Objective:

To strengthen regional cooperation and data governance by developing a shared framework for an Asia-Pacific Networked Geospatial Data Hub that supports sustainable development and disaster risk reduction.

Partnership Period

2020-2024

Target Countries:

Asia-Pacific region

Funding Source:

Government of the Republic of Korea

From forecasting floods and cyclones to planning transport corridors and resilient infrastructure, geospatial data shapes how governments respond to complex challenges. Accurate, location-based information is essential for climate action, disaster risk reduction and sustainable development. Yet across Asia and the Pacific, geospatial systems remain fragmented. National platforms often operate in isolation, governed by differing policies and technical standards. Limited interoperability, data security concerns and uneven technical capacity constrain collaboration. Without a coordinated regional mechanism, the full potential of space-based and earth observation data remains underutilized.

To address this gap, ESCAP and its partners conceptualized the Asia-Pacific Networked Geospatial Data Hub. The project followed a phased approach, beginning with analytical research and extensive stakeholder engagement. Studies mapped existing geospatial platforms and data-sharing practices, identifying policy misalignments and technical barriers. On this basis, a draft master plan, operational principles and an intergovernmental framework were developed to guide implementation and ensure long-term sustainability.

Between 2020 and 2024, the partnership convened 17 regional workshops and expert meetings. Technical consultations and study visits to operational facilities, including the United Nations Global Service Centre, enabled participants to examine practical models for secure and interoperable data management. The initiative also explored emerging technologies to strengthen governance frameworks. Collaborative AI frameworks was assessed for its potential to enhance transparency and trust in transactions; federated learning for enabling data analysis without transferring sensitive information; and cloud computing for improving scalability, accessibility and system resilience.

Momentum has steadily grown. Eighty-seven per cent of participating countries initiated steps to align with the draft master plan, including policy updates, institutional coordination and platform development. Governments across South-East Asia, South Asia, Central Asia and the Pacific have expressed interest in joining the future hub. The blueprint has reached conceptual maturity, signalling readiness for operationalization.

The initiative also reinforced South-South cooperation by linking regional committees from the Asia-Pacific region, the Americas and the Arab States through shared case studies and joint dialogues. Hybrid formats expanded participation, particularly for Pacific Island countries and North and Central Asia, strengthening inclusivity and regional ownership.

A shared regional geospatial infrastructure is now within reach. With common standards, trusted governance arrangements and collaborative innovation, countries are better positioned to transform fragmented data systems into an integrated platform that supports resilient infrastructure, climate action and progress toward the Sustainable Development Goals (SDGs).

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AI & Big Data for Development:

Transforming SDG Monitoring and Official Statistics Across the Asia-Pacific Region

Partners:

National Statistical Offices of Indonesia, Kyrgyzstan, Uzbekistan and Vanuatu; National Research and Innovation Agency (BRIN), Indonesia; Geo-Informatics and Space Technology Development Agency (GISTDA), Thailand; Provincial Water Resources Agency, West Java; Jiangxi Normal University; Prince of Songkla University, Thailand; University of New South Wales; Global Center on Big Data and Data Science for Official Statistics (China); United Nations Department of Economic and Social Affairs (DESA); Food and Agriculture Organization of the United Nations (FAO); United Nations Children's Fund (UNICEF)

Objective:

To strengthen the use of artificial intelligence and big data for local SDG implementation and official statistics across Asia and the Pacific.

Period

2023-2026

Target Countries:

Indonesia, Kyrgyzstan, Maldives, Mongolia, Thailand, Uzbekistan, Vanuatu and 13 other countries across all five subregions of Asia and the Pacific

Funding Source:

- Government of China
- 2030 Agenda for Sustainable Development Sub-Fund under the UN Peace and Development Fund

Delivering the 2030 Agenda requires data that are timely, detailed and locally relevant. Across Asia and the Pacific, governments are under mounting pressure to produce disaggregated statistics that capture fast-changing social, economic and environmental realities. Yet many national statistical offices and subnational authorities lack the tools and infrastructure to harness Artificial Intelligence (AI), big data and geospatial analytics. Traditional surveys are costly and slow, while fragmented datasets constrain evidence-based policymaking. At the local level, limited real-time monitoring of floods, forests, water bodies and crops leaves vulnerable communities exposed to climate and food security risks.

ESCAP, in partnership with space agencies and universities in Indonesia and Thailand, supported geospatial innovations to close critical water data gaps and strengthen water management. In West Java, an AI-powered tool developed by BRIN and the provincial Department of Water Resources integrates Earth observation, drainage, and soil data to transparently prioritize retention pond investments for flood control and drought resilience, while in Thailand, similar approaches are enhancing ecosystem monitoring in Songkla Lake. The Thailand initiative builds on long-standing experience from Poyang Lake in China, where integrated satellite, drone, and ground-based systems underpin early warning, ecosystem protection, and the conservation of critical species and habitats.

In Indonesia, AI and satellite data are guiding smarter placement of retention ponds to manage drought and flood risks.



The National Research and Innovation Agency (BRIN) and the Water Resources Department of West Java Province, conduct a focus group discussion to gather stakeholder perspectives and discuss the importance of remote sensing and artificial intelligence technology in determining potential reservoir locations in West Java, Indonesia, 22 April 2025.

> *By using satellite imagery and remote sensing technology, we can observe the Earth's surface, including the different phases of rice growth.*
>
> **Imam Machdi**
> Chief Executive Officer, Statistics Indonesia

Comprehensive coverage, including remote areas, has improved accuracy and efficiency. The innovation contributed to Indonesia receiving the 2025 Group on Earth Observations Award.

The second component strengthened big data integration into official statistics across 20 countries. Indonesia applied earth observation data to agriculture. Uzbekistan incorporated electronic point-of-sale and web-scraped price data into consumer price index compilation, reducing collection time. Kyrgyzstan produced new SDG indicator estimates using geospatial data, while Vanuatu generated its first national land cover maps since 2008. National strategies were developed to sustain these advances.

> *Geospatial integration is about empowering institutions to make better decisions and uncover insights that were previously invisible.*
>
> **Nazira Kerimalieva**
> First Deputy Chairperson of the National Statistical Committee of the Kyrgyz Republic

The initiative shows that innovation, institutional reform and South-South cooperation can transform how data serve development. Stronger statistical systems, equipped with AI and big data, enable countries to anticipate risks, target resources more effectively and advance the SDGs with greater confidence and ownership.

Read more:

- Guiding disaster risk reduction investments through AI-powered tools | ESCAP
- Geospatial innovations addressing critical water data gaps in Asia

From surveys to satellites: Strengthening rice production statistics | ESCAP

Stats Brief (February 2025 | Issue No. 36): Alternative data sources for price statistics - Uzbekistan's experience modernizing the Consumer Price Index

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Experts from Thailand draw from a decade-long experience of Poyang Lake monitoring, leveraging South-South knowledge exchange and cooperation on water quality monitoring in Jiangxi Province, China, 14 January 2026.



Space for Seeds:

Mapping Crop Diversity to Strengthen Food Security in South-East Asia



Partners:

Aerospace Information Research Institute, Chinese Academy of Sciences (AIR/CAS); National Research and Innovation Agency (BRIN), Indonesia; Brawijaya University, Indonesia; Malaysian Space Agency; Universiti Putra Malaysia Bintulu Campus; Philippine Space Agency; Mariano Marcos State University, Philippines

Objective:

To strengthen crop biodiversity monitoring and support sustainable food systems through space-based technologies and regional cooperation.

Period

2024-2027

Target Countries:

Indonesia, Malaysia, the Philippines

Funding Source:

Aerospace Information Research Institute, Chinese Academy of Sciences (AIR/CAS)

Crop biodiversity is declining across Asia and the Pacific, placing food security and climate resilience at risk. In South-East Asia, diets increasingly rely on a narrow range of cereal crops, while traditional and locally adapted varieties disappear from fields. Despite this, national systems to monitor crop diversity remain fragmented and limited in scale. Without reliable, spatially detailed data, policymakers face challenges in designing strategies to protect agricultural ecosystems and advance SDG 2.4 on sustainable food production.

To confront this challenge, ESCAP partnered with the Aerospace Information Research Institute of the Chinese Academy of Sciences, alongside space agencies and universities in Indonesia, Malaysia and the Philippines, to launch the CropBio project that applies satellite imagery ground data and advanced geospatial technologies to map crop species, track land-use change and assess crop diversity across diverse tropical landscapes. By combining Earth observation data with field data and statistics, the project brings in-depth insights into biodiversity and SDG 2 implementation and reporting.

A central pillar of the initiative is the creation of interoperable geospatial databases that integrate satellite-derived analysis with field observations. Mobile-based applications allow researchers and local stakeholders to classify crop species and collect ground data that validate and refine satellite results. Combining technical assessments together with traditional farming expertise ensures that future agricultural innovations also take into account local realities and farming practices.

More than 60 researchers across the three countries have been trained in spatial crop biodiversity assessment. National workshops and field-based training have enhanced technical skills and fostered collaboration among agricultural, environmental and planning authorities.

Early results point toward durable impact. Integrated data infrastructures are being established to enable continuous crop diversity monitoring, designed for compatibility with national statistical and environmental platforms. Universities are institutionalizing project tools within academic programmes, integrating crop biodiversity data collection and analysis methodologies into university curriculam, and cultivating the next generation of experts. Several partners have mobilized additional resources to scale up related research and applications.



Researchers, officials, and farmers met to discuss field activities and CropBio's role in future agricultural innovation, with facilitation by local agricultural authorities to integrate scientific and traditional knowledge in Tegalgondo Village, Malang Regency, Indonesia, 10 January 2025.

Crop diversity is more than a scientific metric; it is the foundation of resilient food systems. With stronger data, skilled institutions and regional collaboration, countries are better equipped to strengthen climate resilience and secure sustainable food production for future generations.

Read more:

From soil to space: Building flood-resilient cities | ESCAP

From soil to space: Building government capacity for satellite-enabled soil intelligence (pp. 410-411)

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Researchers, students and technical staff across the three project countries co-developed survey tools and field observation procedures with AIRCAS and participated in coaching clinics on the use of drones and mobile data collection tools in Pendem Village, Batu City, Indonesia, 17 November 2024.



Students, faculty and researchers in the Philippines conduct joint fieldwork to develop and validate geospatial tools for crop monitoring and sustainable agriculture. Women made up nearly half of the participants, Ilocos Norte, Philippines, 18 March 2025.



WIFI DX Training of Trainer held in Almaty, Kazakhstan, 10-12 May 2025.

Driving Digital Transformation:

Building Skills for Inclusive Growth



Partners:

National ministries and agencies; civil service training institutes; women entrepreneur associations; academia; ICT-related organizations

Objective:

To strengthen digital skills and institutional capacity across Asia and the Pacific to support inclusive growth and accelerate progress on the Sustainable Development Goals.

Period

2024-2025

Target Countries:

Asia-Pacific region

Funding Source:

- Government of the Republic of Korea
- Incheon Metropolitan City
- Pooled Extrabudgetary (XB) - Institutional support for the Asian and Pacific Training Centre for Information and Communication Technology for Development (APCICT)

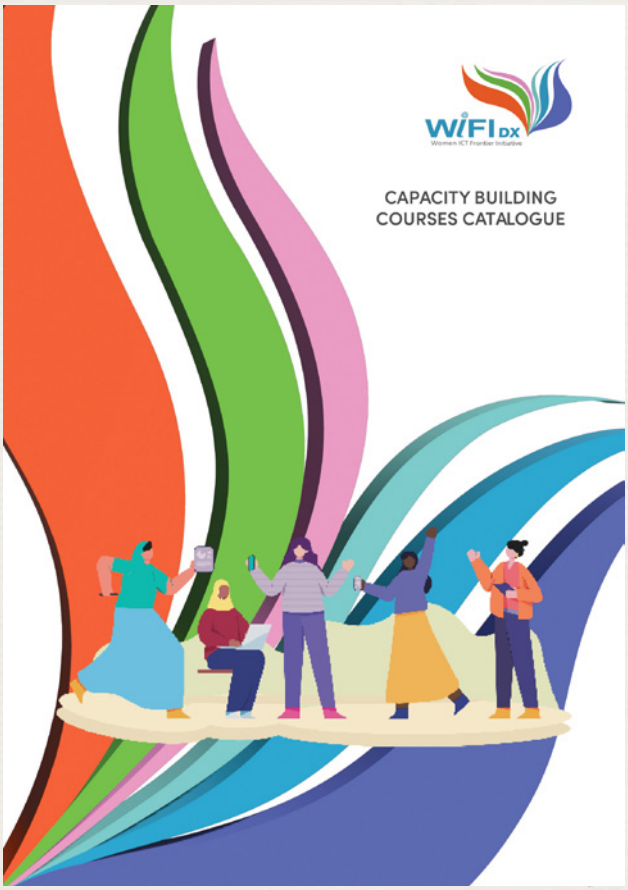
Digital transformation is redefining how economies grow and how governments serve their people. Across Asia and the Pacific, digital public services, e-commerce platforms and data-driven policymaking are reshaping institutions and markets at unprecedented speed. However, significant gaps in digital skills, institutional readiness and inclusive access persist.

Many policymakers lack practical guidance to integrate Information and Communication Technology (ICT) into national development strategies, particularly in emerging areas such as artificial intelligence, data governance and digital public services. Women entrepreneurs and marginalized groups continue to face barriers in accessing digital tools, finance and markets. Without sustained and targeted capacity development, these disparities risk widening the digital divide and slowing progress toward the SDGs.

Through its Asian and Pacific Training Centre for Information and Communication Technology for Development (APCICT), ESCAP implemented a multi-layered strategy to strengthen digital capacities at both policy and grassroots levels. The Academy of ICT Essentials for Government Leaders expanded its reach to 39 countries, offering 19 modules localized in 13 languages. Course content was updated to address emerging priorities, including Artificial Intelligence (AI) ethics, data privacy and protection, open data frameworks and digital governance. These resources equip government officials with practical tools to design inclusive digital strategies and respond to rapidly evolving technologies.

At the entrepreneurial level, the WomenICT Frontier Initiative (WIFI) and its advanced track, WIFI DX, were rolled out in 22 countries. New modules covered e-commerce, digital marketing, financial management, data analytics, business continuity planning, and trust and security in digital technologies, helping women entrepreneurs build practical skills for digital transformation. More than 2,600 women participated in 71 training activities across 19 countries, with women participation frequently exceeding 90 per cent. Localization into additional languages, including Bahasa Indonesia, Telugu, Malay, Russian and Kazakh, expanded outreach and accessibility.

Digital learning platforms were further strengthened through new e-courses on the APCICT Virtual Academy, while the Annual Digital Leaders Programme convened 143 participants to exchange experiences on AI governance and data policy, reinforcing peer learning and regional dialogue.



Cover photo of WIFI DX capacity building courses catalogue.

Regional uptake reflects growing momentum. Fifteen countries reported integrating APCICT modules into national training systems and ICT strategies, shaping policies for inclusive digital development. Governments increasingly view APCICT as a trusted knowledge partner in navigating digital transformation.

Inclusive digital transformation is not automatic; it requires investment in people as much as in technology. Strengthened digital skills, empowered women entrepreneurs and informed policymaking are helping to ensure that innovation translates into opportunity, resilience and shared progress across the region.

Read more:

- Women ICT Frontier Initiative (WIFI)
- Academy of ICT Essentials for Government Leaders

Contact:

APCICT
Asian and Pacific Training Centre for Information and Communication Technology for Development
ESCAP

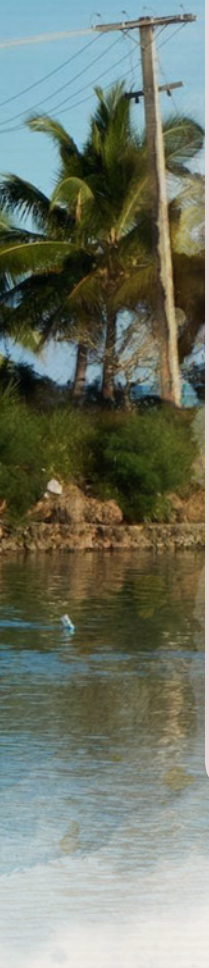
apcict@un.org



Participants engage in discussion during the North and Central Asia Sub-regional Training on Data Governance for Digital Transformation held in Samarkand, Uzbekistan, 23-24 June 2025.



Strengthening Climate-Responsive and Gender-Inclusive Statistics in the Pacific



Partners:

National Statistical Offices; Ministries responsible for SDG coordination

Objective:

To improve the availability and use of climate and gender data in the Pacific by strengthening statistical systems to support inclusive and evidence-based decision-making.

Period

2024

Target Countries:

Pacific region

Funding Source:

United Nations Regular Programme of Technical Cooperation

Pacific Island countries are on the front lines of climate change. Rising seas, intensifying storms and shifting weather patterns threaten livelihoods, infrastructure and ecosystems. Effective responses depend not only on finance and technology but also on strong, integrated and policy-relevant statistics.

In Fiji and Tonga, gaps in environmental, climate-related and gender-responsive data have constrained policymakers' ability to align mitigation, adaptation and inclusive development strategies. Weak integration between environmental and economic statistics has limited evidence-based decision-making in areas such as land use, climate finance, disaster risk reduction and gender-responsive climate action. Strengthening institutional capacity to produce and apply high-quality statistics is therefore critical to advancing the 2030 Agenda and national climate commitments.

Through ESCAP's targeted advisory support, practical, context-specific solutions were advanced. In Tonga, assistance to the Tonga Statistics Department improved the quality and relevance of priority environmental and economic data. Environmental-economic accounting tools were operationalized, embedding stronger evidence into national planning and budgeting. Support for a national tourism statistics framework elevated sustainable tourism data within policy discussions. Multi-stakeholder engagement among the statistics office, line ministries and sectoral agencies led to a new coordination mechanism for tourism statistics and more coherent cross-sector collaboration.

In Fiji, support to the Fiji Bureau of Statistics initiated development of a multidimensional national climate statistics framework. Workshops strengthened the production and use of data at the gender–climate nexus. A mapping exercise identified linkages across environmental, social, economic and gender dimensions within priority climate domains, including clean energy, green transport, disaster prevention, nature-based solutions and climate finance.

Despite limited datasets, Fiji produced a data brief analysing gender implications in climate policy areas, including access to clean cooking fuels, unpaid labour and intra-household decision-making, issues which are often overlooked in climate discussions. This evidence enables policymakers to better integrate gender considerations into climate investments and financing proposals.



Group photo of the Multi-stakeholder National Workshop on Advancing Climate Change-related Statistics in Fiji, 28 October 2025.

> *Climate change affects everyone, but not equally. These reports help us understand where the gaps are, so that women, men and vulnerable groups can all benefit from climate action.*
>
> **Senivasa Waqairamasi**
> Director of Environment and Climate Change in Fiji

> *Climate change is not an abstract issue for us; it is a lived experience for every Fijian. High-quality climate statistics allow us to understand what is changing, who is most vulnerable, and how best to respond.*

H.E. Kemueli Naiqama
Former Chief Executive of the Fiji Bureau of Statistics;
currently Ambassador of Fiji to Japan

Even in data-constrained contexts, targeted technical cooperation and national ownership can turn fragmented information into a solid foundation for climate-resilient and inclusive policymaking.

Read more:

Experimental Climate Change - Related Statistics for Fiji 2025 - Fiji Bureau of Statistics & Gender-Climate-Change_2025.pdf

Contact:

Statistics Division
stat.unescap@un.org



Participant presenting during the Multi-stakeholder National Workshop on Advancing Climate Change-related Statistics in Fiji, 28-29 October 2025.



Clean Air for Sustainable ASEAN:

Harnessing Digital Innovation for Healthier Cities



Partners:

Ministry of Environment, Republic of Korea; National Institute of Environmental Research, Republic of Korea; Pollution Control Department, Thailand; Seoul National University; Yonsei University; ASEAN Secretariat; national ministries of environment and health across ASEAN Member States

Objective:

To advance coordinated air quality management across ASEAN by combining scientific evidence, digital innovation and multi-sector cooperation to inform policy and protect public health.

Period

2023-2026

Target Countries:

ASEAN Member States

Funding Source:

Seoul National University

Air pollution remains a critical and transboundary challenge across South-East Asia, affecting public health, economic productivity and environmental sustainability. In many urban centres, pollution levels significantly exceed World Health Organization guidelines, contributing to respiratory and cardiovascular diseases and premature mortality. Yet effective action is often hampered by fragmented monitoring systems, uneven technical capacity and limited integration of digital tools. In several countries, sparse monitoring networks and limited analytical capabilities restrict the ability to identify pollution sources, assess health impacts and coordinate responses across borders.

The Clean Air for Sustainable ASEAN (CASA) initiative addresses these gaps through a comprehensive, cross-sectoral approach linking environmental science, public health and information and communication technologies.

Strengthening research and evidence is central to the initiative. Studies in major cities across all ten ASEAN Member States are identifying key pollution sources and assessing their public health impacts, generating robust national data on pollution drivers and associated health burdens. This scientific foundation supports more targeted mitigation strategies and informed policy design.

CASA also advances digital applications for air quality management. By integrating ground-based monitoring with satellite observations, including data from the Geostationary Environment Monitoring Spectrometer of the Republic of Korea, the initiative promotes a more harmonized regional understanding of pollution trends. A prototype regional air quality data platform is being developed to facilitate data-sharing and comparability across countries.

Capacity development is another core component. Regional workshops strengthen the ability of government officials and researchers to apply Artificial Intelligence (AI), geospatial analysis and forecasting tools in air quality management. A workshop held in Bali in November 2025 provided hands-on training in AI-enabled forecasting and satellite data interpretation. Draft regional guidance for responding to high-pollution events is also under preparation to support timely and coordinated action.

CASA further ensures that technical findings inform policy processes. Evidence generated under the project has been consolidated into a draft "Action Plan on Clean Air for Sustainable ASEAN," currently under review by the ASEAN Working Group on Environmentally Sustainable Cities, translating research into actionable regional commitments.

The initiative has strengthened the regional evidence base, enhanced digital competencies and improved monitoring coverage in underserved areas. New monitoring stations have been deployed, and sustained working groups now link environment, health and Information and Communication Technology (ICT) agencies across ASEAN.

By aligning science, digital innovation and policy dialogue, CASA demonstrates that coordinated regional action is essential to address transboundary air pollution and advance cleaner air and healthier communities across ASEAN.



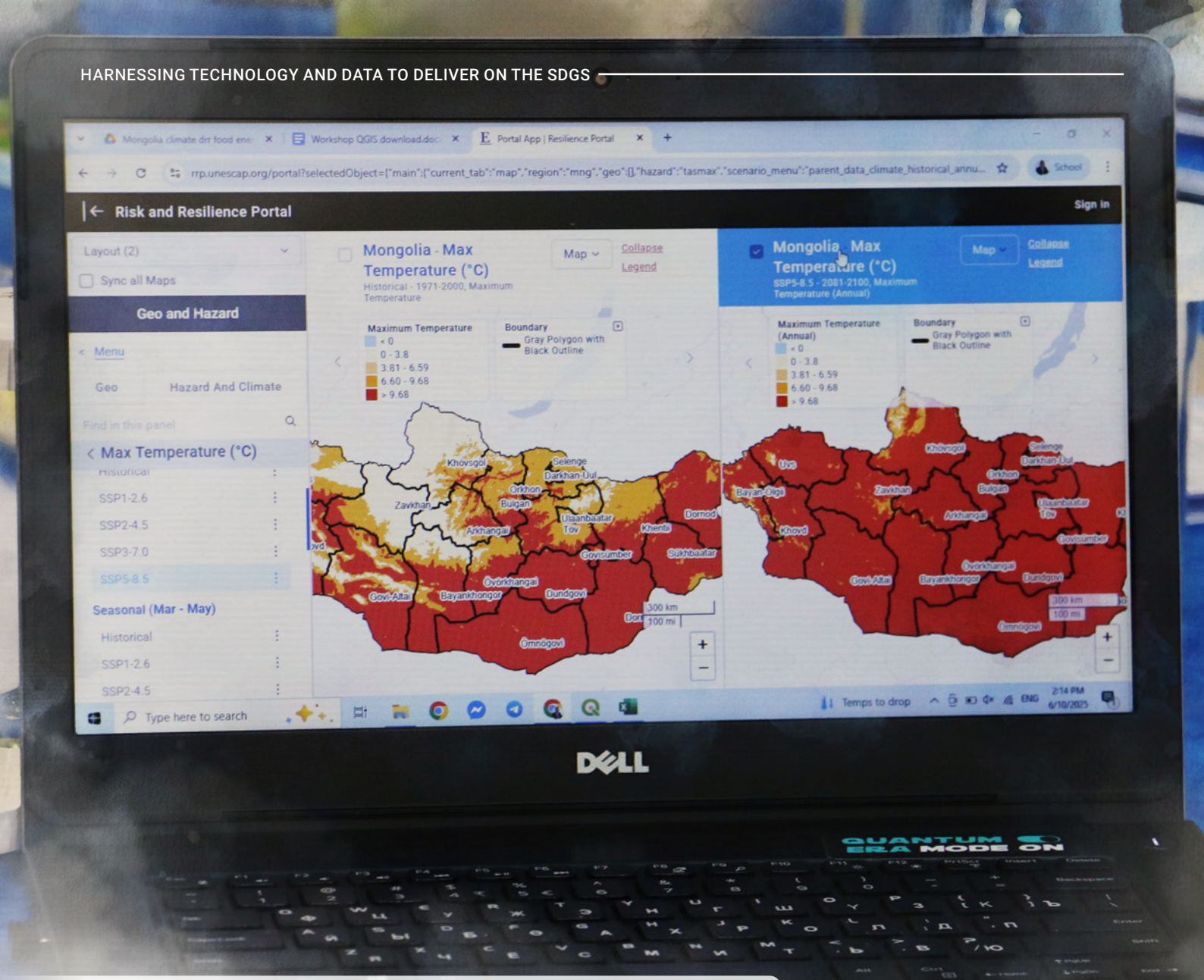
Group photo during a site visit to AQMS station during the Capacity-building Workshop on Technology-driven Solutions for Air Pollution in ASEAN in Bali, Indonesia, 12-13 November 2025.

Contact:

ICT and Disaster Risk Reduction Division

escap-idd@un.org

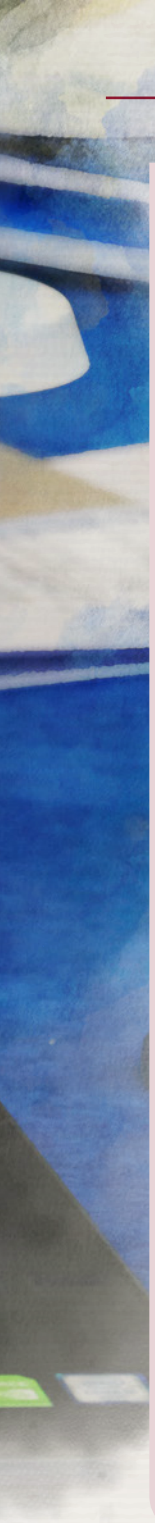




The Risk and Resilience Portal displayed on a participant's laptop during the Capacity Development Training workshop: Building disaster and climate resilience in Bhutan in critical sectors held in Punakha, Bhuan, 21-25 July 2025.

Data for Resilience:

Digital Tools to Safeguard Food and Energy Systems



Partners:

National Institute for Environmental Studies (NIES), Japan; Korea International Cooperation Agency (KOICA); Jeju National University; Centre for Climate Research Singapore; Coalition for Disaster Resilient Infrastructure (CDRI); International Federation of Red Cross and Red Crescent Societies (IFRC); Regional Integrated Multi-Hazard Early Warning System (RIMES); International Institute for Applied Systems Analysis (IIASA); International Institute for Environment and Development (IIED); Asia Pacific Network Information Centre Foundation; Food and Agriculture Organization of the United Nations (FAO); World Food Programme (WFP); United Nations Office for Disaster Risk Reduction (UNDRR); World Meteorological Organization (WMO); United Nations Satellite Centre (UNOSAT); International Renewable Energy Agency (IRENA)

Objective:

To enhance countries' ability to anticipate and manage climate risks using advanced data, digital solutions and strategic partnerships to safeguard food and energy systems.

Period

2024-2027

Target Countries:

Armenia, Bhutan, Fiji, Kazakhstan, Kyrgyzstan, Lao PDR, Mongolia, Nepal, Samoa, Solomon Islands, Tajikistan and Tonga

Funding Source:

- Government of the Republic of Korea
- Government of the Russian Federation
- United Nations Development Account

Climate extremes are daily realities reshaping farms, power grids and livelihoods across the Asia-Pacific region. Floods, droughts and heatwaves are intensifying food insecurity and disrupting energy systems, with smallholder farmers and fragile infrastructure bearing the brunt. Slow-onset processes such as glacier melt and land degradation compound these pressures, deepening long-term risks. Yet many countries still lack high-resolution climate projections and integrated digital tools to anticipate and manage cascading threats. Without actionable analytics, adaptation planning remains reactive, leaving vulnerable communities exposed.

ESCAP is helping close this gap by strengthening digital climate risk management through innovation and partnerships.

A key milestone has been the upgrade of the ESCAP Risk and Resilience Portal, incorporating downscaled climate projections from 100 km to 1 km resolution to localize hazard and climate risk assessments. Initially validated in Bhutan, the enhanced analytics are now being applied at district levels in over 10 countries to inform long-term planning and adaptation strategies.

Integrated digital toolkits further support decision-making. Prototype risk assessment and climate adaptation toolkits link hazard mapping, vulnerability analysis and scenario-based planning for food and energy systems. In partnership with UNOSAT, ESCAP developed the Insights on Food System Risks (INFER) Tool, featuring an interactive dashboard for subnational analysis to help safeguard smallholder farmers.

Capacity development remains central. A five-day training in Bhutan equipped 20 district disaster officers with practical skills, leading to the institutionalization of the Risk and Resilience Portal under the Department of Local Governance and Disaster Management. Additional workshops strengthened policy design capacities multiple countries including Laos, Cambodia, Maldives, Mongolia, Tajikistan and Kyrgyzstan.

Regional innovation partnerships have amplified impact. Collaboration with NIES under the Asia-Pacific Climate Change Adaptation Information Platform integrates high-resolution climate data and adaptation cost analytics. Joint work with CDRI combines portal analytics with the Global Infrastructure Resilience Index data to visualize and assess vulnerabilities in critical sectors such as agriculture, energy, and transport for all countries in the Asia Pacific region. Engagement with the Santiago Network under the United Nations Framework Convention on Climate Change (UNFCCC) further positions countries to access technical assistance for loss and damage and adaptation finance.

In Central Asia, bilingual country pages for Kazakhstan, Kyrgyzstan and Tajikistan now provide harmonized datasets and interactive visualizations on glacier retreat, drought and land degradation. Gender-disaggregated data embedded in the Portal enables assessment of differentiated impacts, while a Slow-Onset Disaster Storyboard translates complex processes into accessible narratives.

The result is a shift in how climate risks are understood and managed. Governments are increasingly equipped with high-resolution data, integrated analytics and institutional capacity to anticipate shocks, protect food and energy systems and plan adaptation investments with greater precision. This strengthened digital foundation supports more proactive, risk-informed development across the region.

Contact:

ICT and Disaster Risk Reduction Division

escap-idd@un.org



Chief Programme Officer at the Department of Local Governance and Disaster Management, Bhutan, presents during the Capacity Development Training Workshop on Building Disaster and Climate Resilience in Critical Sectors in Punakha, Bhutan, 21–25 July 2025.





CHAPTER 4

LEAVING NO ONE BEHIND

Leaving no one behind (LNOB) is the central and transformative commitment of the 2030 Agenda for Sustainable Development, requiring that development progress reaches all people, particularly those furthest behind and most at risk of exclusion. LNOB calls for moving beyond national averages to understand how inequalities arise from multiple and overlapping circumstances, including income, gender, age, disability, migration status and geographic location. This intersectional perspective is essential for identifying who is being left behind and why, and for designing policies that effectively address multidimensional disadvantage.

The scale of exclusion across Asia and the Pacific underscores the urgency of this commitment. Approximately 45 per cent of the regional population lacks access to any form of social protection benefit, and only 31.4 per cent of vulnerable persons[18] have access to any form of income security. Coverage gaps persist across the life course, with fewer than 40 per cent of mothers[19] of newborns accessing maternity benefits and only around 13 per cent of unemployed persons receiving unemployment support.[20] Around 62 per cent of women of reproductive age are engaged in informal employment, while persons with disabilities face an employment-to-population ratio of just 24.3 per cent, compared to 62.1 per cent for persons without disabilities.[21] Migrant workers and refugees remain disproportionately excluded from social protection, while the increasing intensity of extreme climate events further exacerbates inequalities, particularly for lower-income populations lacking coping mechanisms to build resilience.[22]

Rather than a stand-alone theme, LNOB functions in ESCAP's work as a systems lens applied across social development priorities, spanning social protection, social inclusion and gender equality, including for persons with disabilities, older persons, youth and migrants. Support to member States spans high-level regional analysis, policy dialogue and capacity-building.[23] The ESCAP LNOB Platform provides an analytical framework and data tools to identify inequalities of opportunity and assess how different circumstances intersect to shape development outcomes, helping policymakers understand disparities within and across countries and supporting targeted policy responses.

ESCAP's approach is grounded in its core strengths in data-informed policy research, regional knowledge platforms and multi-stakeholder engagement. Its work is guided by interlocking global and regional frameworks, including the 2030 Agenda, the Convention on the Rights of Persons with Disabilities, the Jakarta Declaration on the Asian and Pacific Decade of Persons with Disabilities, 2023-2032, the Madrid International Plan of Action on Ageing, the Action Plan to Strengthen Regional Cooperation on Social Protection and the Global Compact for Safe, Orderly and Regular Migration. Across these frameworks, guiding principles remain consistent: rights-based inclusion, non-discrimination, participation and evidence-based policymaking, with explicit attention to overlapping disadvantages and diverse country contexts.

[18] [19] [20] [21] [22] ESCAP (2024) Protecting our Future Today: Social Protection in Asia and the Pacific. Social Outlook for Asia and the Pacific. Available at: https://repository.unescap.org/server/api/core/bitstreams/27224ede-c0ca-4067-a792-3b63e45f6a3f/content

[22] ESCAP. Social Development in Asia and the Pacific, https://www.unescap.org/our-work/social-development

[23] ESCAP (2020) Action plan to strengthen regional cooperation on social protection in Asia and the Pacific. Available at: https://repository.unescap.org/server/api/core/bitstreams/db6c31e0-2b7d-4c28-baa7-7f03ed75e34e/content

Gaps in disaggregated data, analytical tools, institutional coordination and inclusive policy design constrain progress across many member States. Technical cooperation addresses these by strengthening analytical and data capacities, policy and institutional frameworks, and human capacities through training, peer learning and advisory services, tailored to diverse national contexts and embedded within national institutions to ensure sustained ownership beyond individual projects.

The success stories that follow illustrate how this work translates the LNOB commitment into tangible results across social protection, disability inclusion, gender equality, population ageing and climate resilience throughout Asia and the Pacific.

Insights from our partners



GULZAADA AIDARALIEVA

Head, Sector for the Development of Professional Standards, Ministry of Labour and Social Development, Kyrgyzstan



Enabling Inclusive Disaster Risk Reduction Through E-Learning

Partners:

National Disaster Management Authorities (NDMA); Asia-Pacific Development Center on Disability; Youth Innovation Lab; Special Talent Exchange Program; Partnership of Philippine Support Service Agencies Inc. (PHILSSA); United Nations Office for Disaster Risk Reduction (UNDRR); Office of the United Nations High Commissioner for Human Rights (OHCHR)

Objective:

To strengthen gender-responsive disability-inclusive disaster risk reduction in Asia and the Pacific by developing and institutionalizing accessible national e-learning platforms for government officials and practitioners.

Period

2021-2024

Target Countries:

Lao PDR, Nepal, Pakistan, the Philippines

Funding Source:

Government of Japan

When disasters strike, inequalities widen. For women and girls with disabilities, hazards such as floods, earthquakes or cyclones can quickly become crises of exclusion as evacuation routes may be inaccessible, shelters unprepared and recovery assistance out of reach. In Asia and the Pacific, the world's most disaster-prone region, this reality affects millions. Of the region's 750 million persons with disabilities, many face disproportionate exposure to climate and disaster risks, compounded by social and economic barriers.

Global and regional frameworks, including the Sendai Framework for Disaster Risk Reduction and SDG 11, call for inclusive resilience. Progress is evident: by 2021, at least 26 countries and territories in the region had developed disaster risk reduction (DRR) frameworks that reference persons with disabilities. Yet implementation continues to lag. ESCAP survey findings showed that only 15 countries and territories in the region had designated training on disability-inclusive DRR (DiDRR), limiting institutional capacity to translate policy commitments into practice.

From June 2021 to June 2024, ESCAP partnered with the Asia-Pacific Development Center on Disability (APCD), national disaster management authorities and civil society organizations – including Youth Innovation Lab in Nepal, the Special Talent Exchange Program in Pakistan and Partnership Philippine Support Service Agencies (PHILSSA) – with support from the Government of Japan. Together, they developed and customized accessible e-learning platforms on gender-responsive DiDRR for Lao PDR, Nepal, Pakistan and the Philippines.

Rather than applying a standardized template, the initiative localized each course to national policy frameworks, risk profiles and administrative systems. Content was translated where needed and aligned with accessibility standards. Persons with disabilities were actively engaged in drafting, testing and launching the modules, ensuring relevance and usability. National launch events convened government officials, organizations of persons with disabilities, UNDRR, OHCHR and other partners. In several countries, formal memoranda required DRR officials to complete the training.

By 2024, all four countries had officially launched their customized platforms on government websites. In Nepal, Pakistan and the Philippines, the courses were institutionalized as mandatory professional development for DRR officials. In Lao PDR, where digital learning remains relatively new, the government allocated budget to extend training to provincial DRR focal points. Feedback highlighted the strong integration of gender and disability perspectives and the visible leadership of women in DRR.

The initiative also fostered South-South cooperation, enabling countries to exchange tools and lessons. The partnership demonstrates that digital platforms, when grounded in participation and policy integration, can strengthen inclusive preparedness systems and bring disaster risk reduction closer to the goal of leaving no one behind.

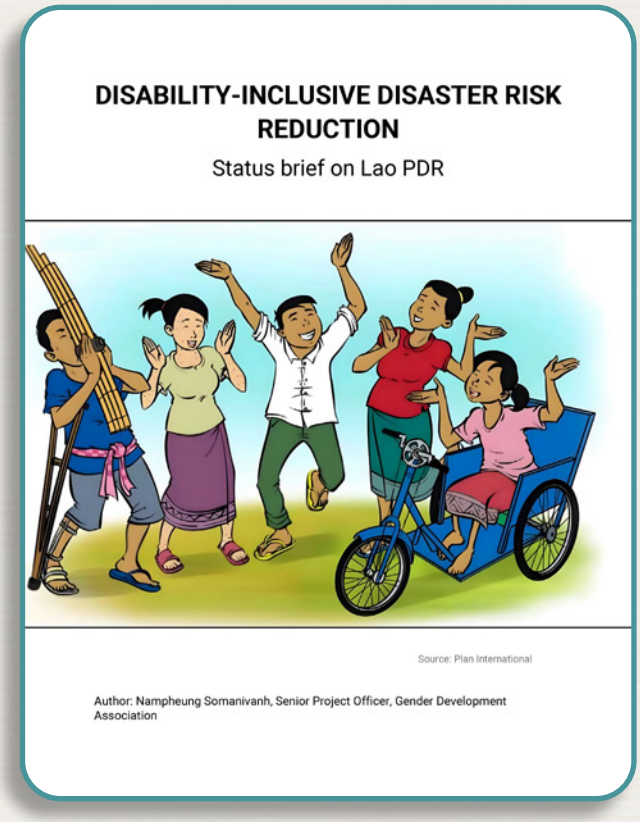
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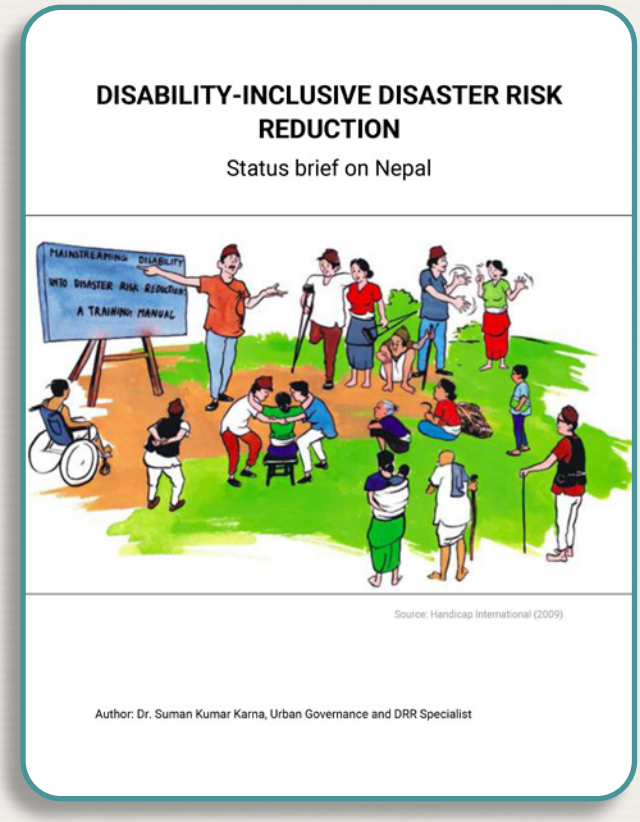
DiDRR e-Learning modules: Learning on Disability-Inclusive Disaster Risk Reduction | Make The Right Real

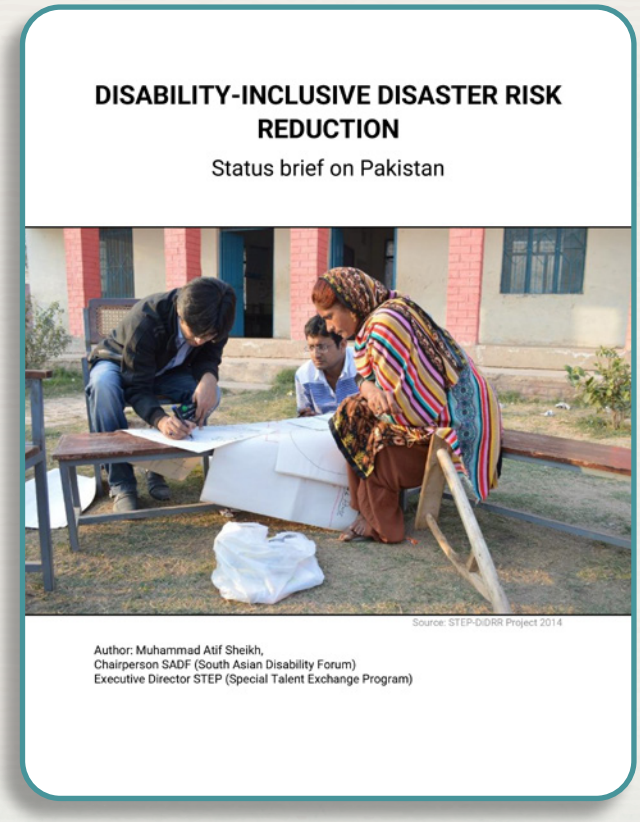
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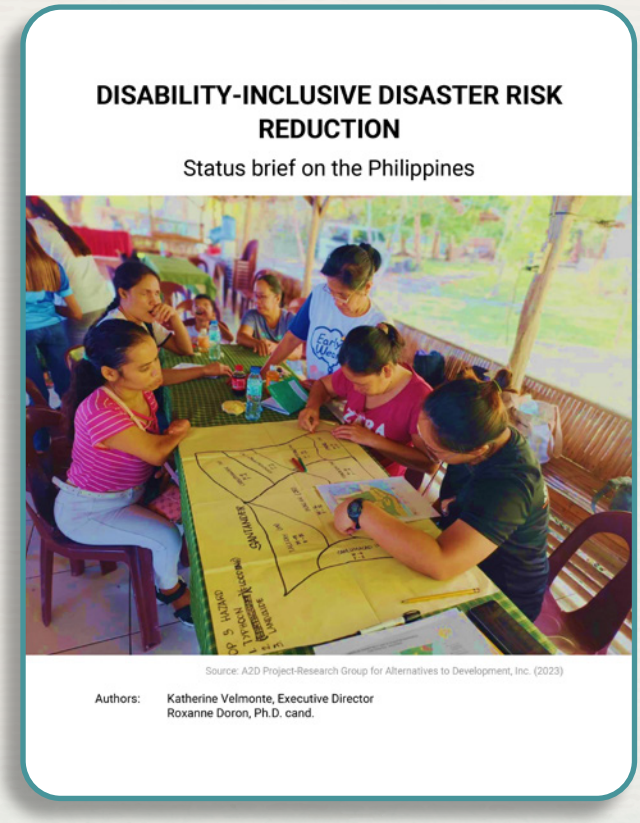
Social Development Division

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Cover photos of the country briefs.



From Invisible to Invaluable:

Building Resilient Care Systems for Gender Equality

Partners:

National women's machineries in Cambodia, Indonesia, the Philippines and Thailand; All-China Women's Federation; China Development Research Foundation; China Center for International Knowledge on Development; Institute of Development Studies; Oxfam Asia; Global Alliance for Care; ASEAN Secretariat; ASEAN Committee on Women; UN Women; United Nations Development Programme (UNDP); International Labour Organization (ILO)

Objective:

To transform care systems in Asia and the Pacific by strengthening policy frameworks, regional cooperation and women's economic empowerment in the care economy.

Period

2022-2027

Target Countries:

Cambodia, China, Indonesia, the Philippines (Phase I); Cambodia and Thailand (Phase II)

Funding Source:

Government of China

The care economy is at a crossroads. Across Asia and the Pacific, women and girls perform two to five times more unpaid care work than men. This is invisible labour that limits access to education, decent work and leadership, reinforcing gender inequality and economic vulnerability. The COVID-19 pandemic intensified these pressures, while demographic change, climate impacts and urbanization continue to accelerate demand for care. Although globally valued at an estimated US$11 trillion, care systems remain persistently undervalued and underfunded.[24]

[24] Laura Addati, Umberto Cattaneo, Valeria Esquivel and Isabel Valarino, Care Work and Care Jobs for the Future of Decent Work (International Labour Organization, 2018). Available at https://www.ilo.org/global/publications/books/WCMS_633135/lang--en/index.htm

In response, ESCAP and its partners advanced a whole-of-government, whole-of-society approach to position care as a driver of inclusive growth and resilience. Using ESCAP's Model Framework for Policy Action on the Care Economy, countries undertook national consultations and policy development. Cambodia is finalizing its National Action Plan on the Care Economy; Indonesia adopted a Care Economy Roadmap 2025–2045; the Philippines is validating its National Care Economy Policy Framework; and China advanced care-sensitive policy proposals through a national roundtable.

At the regional level, ESCAP supported the ASEAN Declaration on Strengthening the Care Economy, adopted at the 2024 ASEAN Summit, aligning national reforms with a shared gender-responsive vision.

> *By investing together in the care economy, we can build a more inclusive, resilient and equitable future for all.*
>
> **H.E. Ing Kantha Phavi**
> Minister of Women's Affairs of Cambodia
>
> stated at the **2024 Asia-Pacific Care Champions:** From Invisible to Invaluable.

Policy momentum translated into local action. In the Philippines, Quinapondan Municipality passed a landmark care ordinance, inspiring 23 other local governments to follow. Vice Mayor Leo Jasper Candido noted, "The care ordinance has helped communities fight inequality and economic justice through recognizing and valuing unpaid care and domestic work," adding, "We rise by lifting others."

Regional forums such as the Asia-Pacific Care Forum and Asia-Pacific Care Learning Week strengthened peer learning and collaboration on financing, climate resilience and innovation. As UN Women Regional Director Christine Arab emphasized, "It will be crucial to convert the growing momentum in care in our region into tangible benefits for women and girls, which will only be possible with the right investments and commitment."

By embedding care into national strategies, regional commitments and local ordinances, the initiative has shifted care from an invisible burden to a recognized public good. With Phase II expanding support to women entrepreneurs in the care sector, the partnership is advancing gender equality while generating decent work and strengthening social and economic resilience across the region.

Read more:

- A Policymaker's Toolkit for Valuing Unpaid Care and Domestic Work and Investing in the Care Economy
- ASEAN Declaration on Strengthening the Care Economy and Fostering Resilience Towards the Post-2025 ASEAN Community - ASEAN Main Portal

Country Case Studies on Care: Cambodia, Indonesia, the Philippines

- A Region of Solutions: Recognizing Care Work: From Invisible to Invaluable
- Transforming care systems towards a feminist future: applying the three horizons framework
- Investing in care: A pathway to gender equality in ASEAN

Contact:

Social Development Division

escap-sdd@un.org



A photo taken from the 2024 Asia-Pacific Care Champions event held in Bangkok, Thailand, 21 November 2024.



Digital Inclusion for All:

Empowering Persons with Disabilities in Asia and the Pacific

Partners:

China Disabled Persons' Federation; Ningxia Hui Autonomous Region Disabled Persons' Federation; Saksham; Sao Mai Center for the Blind; Rehabilitation International Asia-Pacific; International Telecommunication Union (ITU) ; United Nations Country Teams

Objective:

To advance digital inclusion of persons with disabilities in Asia and the Pacific by developing accessible technologies, strengthening digital skills and promoting inclusive digital policies.

Period

2023-2025

Target Countries:

China, India, Viet Nam and other developing countries in the Asia-Pacific region

Funding Source:

Rehabilitation International

Digital transformation is reshaping economies and societies, yet millions remain excluded from its benefits. In Asia and the Pacific, more than 750 million persons with disabilities face persistent barriers to accessing digital technologies, limiting opportunities for education, employment, health services and civic participation. Women and girls with disabilities encounter compounded exclusion at the intersection of gender inequality and disability-based discrimination. Despite global commitments under the Convention on the Rights of Persons with Disabilities and the 2030 Agenda, progress toward digital inclusion remains uneven.[25]

[25] ESCAP. Disability at a glance 2019. Investing in Accessibility in Asia and the Pacific. 2019. https://repository.unescap.org/server/api/core/bitstreams/0dc53e6a-8aa2-4106-af0e-cc96b2b95d0f/content

To address these gaps, ESCAP partnered with organizations of and for persons with disabilities in China, India and Viet Nam to co-develop accessible digital products and strengthen digital skills. Multi-stakeholder task forces, bringing together persons with disabilities, policymakers and ICT experts, guided implementation and reinforced community ownership.

In China, the Ningxia Disabled Persons' Federation developed accessible digital communication and navigation devices for blind persons and integrated them into local mapping systems to support independent living. Partnerships with multimedia companies expanded accessible content to 212 low-income households with blind members. In India, Saksham designed assistive devices for persons with visual, physical and hearing disabilities and trained 390 district-level champions, who then supported 1,533 persons with disabilities (as of December 2025) on accessing and using assistive solutions via a digital app. This support network has continued to function beyond the project duration.

> *Digital access is empowerment. When persons with disabilities have the right tools, they become contributors, innovators and leaders.*
>
> **Rajive Raturi**
> Strategic Advisor at Saksham

In Viet Nam, the Sao Mai Center for the Blind upgraded its Braille software to convert documents into accessible formats and trained more than 90 persons with disabilities, including youth and women, in accessible book production and digital literacy.

> *Accessible technology opens doors to knowledge and employment. It allows persons with disabilities to participate in society with dignity and confidence.*
>
> **Dang Hoai Phuc**
> Director at Sao Mai Center for the Blind

At the regional level, ESCAP and the International Telecommunication Union co-developed a policy paper on digital inclusion, informing dialogue at a regional forum on digital inclusion and the future of work in June 2025. By 2025, all partners had piloted accessible devices and expanded skills training with integrated gender perspectives. The initiative demonstrates that inclusive innovation is achievable when persons with disabilities are at the centre of design and decision-making.

Contact:

Social Development Division

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A young blind woman at the user training workshop held in Chhattisgarh, India, 8 May 2025.



From Data to Decisions:

Advancing SDG Planning and Investment in South-East Asia and the Pacific

Objective:

To enhance subregional capacities for evidence-based SDG planning, monitoring and investment by supporting national and regional systems in South-East Asia and Pacific small island developing States.

Period

2024

Target Countries:

American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu; and ASEAN Member States

Funding Source:

- Government of Japan
- United Nations Regular Programme of Technical Cooperation

Turning the ambitions of the 2030 Agenda into measurable results remains a complex task. In parts of South-East Asia and the Pacific, progress on selected SDGs has been uneven. Governments often struggle to consistently assess results, integrate findings into planning and budgeting, and align investment with sustainable development priorities. ASEAN member States have called for stronger tools to connect SDG data with policy and financing decisions. For Pacific small island developing States (SIDS), limited institutional capacity, climate vulnerability and financing constraints intensify these challenges, underscoring the need for integrated approaches linking data, planning, finance and regional cooperation.

ESCAP provided subregional support to strengthen SDG data systems, advance policy coherence and promote sustainable investment. In South-East Asia, ASEAN, Indonesia and Lao PDR applied ESCAP's National SDG Tracker to assess progress, identify gaps and inform Voluntary National Reviews. Workshops and knowledge products enhanced officials' capacity to use SDG indicators for evidence-based planning and policy design.

Using the newly developed "Indicator Guidelines for Policy Monitoring and Reporting in the Pacific" (developed by ESCAP in partnership with the Pacific Community), countries such as Tuvalu, Cook Islands, Fiji, Tonga and Kiribati have strengthened national indicator frameworks to monitor both national development plans and sector plans. They received hands-on advisory support to improve monitoring, reporting and institutional coordination, helping align national reporting with global and regional reporting (2050 Strategy for the Blue Pacific Continent) and integrate SDG targets into planning and budgeting systems.

Regional workshops and peer learning translated data into action. In South-East Asia, sessions on SDG integration, budget tagging and subnational assessments linked data analysis with planning and investment strategies.



Group photo from the Cook Islands workshop on the implementation of the Indicator Guidelines held in Rarontonga, Cook islands, 3-4 September 2024.

> *The workshop on valuation of ecosystem services and goods is really helpful and timely. Evaluating and putting a monetary value on environmental services will be essential for our conservation efforts.*
>
> **Wycliff Junior Bakeo**
> Policy Analyst in Vanuatu

By the end of 2024, countries in both subregions had strengthened their capacity to use SDG data as a tool for policy formulation. Indonesia and Lao PDR improved their ability to measure progress and integrate results into planning. Pacific SIDS enhanced indicator frameworks, planning systems and institutional coordination. Regional platforms facilitated South-South learning and exchange.

Stronger linkages between data, planning and investment are enabling countries to translate SDG commitments into concrete action and build a more durable foundation for evidence-based, sustainable development.

Read more:

Indicator guidelines for policy monitoring and reporting in the Pacific



Cover photo of the Indicator Gudelines for Policy Monitoring and Reporting in the Pacific.

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Ageing with Dignity:

Strengthening Policy Frameworks for a Society for All Ages



Partners:

China Population and Development Research Centre (CPDRC); Chiang Mai University; HelpAge International; Tsao Foundation; Asia-Pacific Informal Regional Network of Ageing Focal Points (ESCAP as Secretariat); International Labour Organization (ILO); International Telecommunication Union (ITU); United Nations Population Fund (UNFPA); World Health Organization (WHO)

Objective:

To strengthen national policy frameworks for population ageing by promoting evidence-based, gender-responsive and digitally inclusive approaches across Asia and the Pacific.

Period

2023-2026

Target Countries:

Azerbaijan, Cambodia, India, Kazakhstan, Kyrgyzstan, Lao PDR, Mongolia, Türkiye, Viet Nam

Funding Source:

- Government of China
- Government of the Russian Federation

Societies across Asia and the Pacific are ageing at an unprecedented pace. By 2050, older persons are projected to comprise nearly one-quarter of the region's population, reshaping labour markets, social protection systems and family structures. In North and Central Asia, demographic transitions intersect with low pension benefits, changing family care arrangements and persistent gender inequalities.

Rapid digitalization has also created a "grey digital divide," leaving many older persons, particularly older women, with limited access to digital tools and essential services. Despite global frameworks and commitments, many countries lack comprehensive, gender-responsive ageing policies, and policymakers face gaps in designing integrated frameworks that address health, long-term care, employment and digital inclusion.

ESCAP launched complementary regional initiatives to support governments in mainstreaming ageing into national policy frameworks. Knowledge generation formed a central pillar. ESCAP translated its practical guide on ageing policy development into Russian and produced analytical materials on demographic trends and policy gaps. Surveys of older persons in Cambodia, India, Kyrgyzstan, Lao PDR and Viet Nam – conducted with older people's associations – assessed digital literacy, skills gaps and needs. Findings, published in the Asia-Pacific Sustainable Development Journal, informed the development of training materials and policy tools.

Policy dashboards and repositories were expanded to support evidence-based decision-making. AI-enabled translation and filtering enhanced usability, while good practices on digital literacy and ageing from China, Japan and the Republic of Korea were incorporated to foster regional peer learning and adaptation.

Regional engagement and capacity-building reinforced these efforts. A subregional expert group meeting and workshop in Almaty in October 2025, held with United Nations Economic Commission for Europe (UNECE), brought together government focal points, civil society and academic experts. Participants noted the sessions addressed national priorities and increased understanding of policy options. Several countries expressed interest in assessing existing ageing policies and improving intra-ministerial coordination, a key challenge in implementing integrated frameworks.

Digital inclusion was promoted through regional meetings in Beijing and Chiang Mai. Government focal points and representatives of older people's associations accessed ESCAP's digital literacy toolkit, including multilingual guides and video modules, and shared experiences to inform national strategies.

In its first year, the initiative laid a strong foundation for gender-responsive and digitally inclusive ageing policies. Broader language accessibility, strengthened tools and enhanced regional cooperation are equipping governments to respond to demographic change and ensure older persons remain active participants in increasingly digital societies.

Read more:

Demographic Changes in Asia and the Pacific

A practical guide : developing and revising policy documents on older persons in Asia and the Pacific | ESCAP

Embracing ageing, empowering all generations

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Social Development Division

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Safe Journeys to School:

Building Safer School Zones for Children in Viet Nam



Partners:

Ministry of Transport, Viet Nam; AIP Foundation; International Road Assessment Programme (iRAP)

Objective:

To improve road safety for children by establishing national standards for school zones and piloting safer infrastructure through policy advocacy, capacity building, and community engagement.

Period

2024-2026

Target Countries:

Viet Nam

Funding Source:

UN Road Safety Trust Fund

Every day, over 17 million children in Viet Nam make their way to school on roads shared with speeding traffic and minimal pedestrian protections. In 2018 alone, 2,290 children died in traffic accidents. Without a national definition of school zones or consistent safety standards, these young travelers face fragmented and uneven protection across the country.

To tackle this challenge, ESCAP partnered with AIP Foundation, iRAP and the Ministry of Transport to launch the Safe School Zones in Viet Nam project. The initiative combines legal reform, training, infrastructure pilots and community outreach to create safer journeys for children, particularly in secondary cities, where interventions aim to reduce inequalities in road safety.

On September 22, 2022, a significant key milestone was achieved with the Safe School Zone (SSZ) Guide accepted as the reference materials for school zones by the MOT through the official document number 9704/BGTVT-ATGT. The guide provides clear definitions, safety parameters and basic traffic education for students. It lays the foundation for legislation requiring new schools to meet international safety standards and for upgrading existing schools.

The project takes a practical, evidence-based approach. Capacity-building workshops equip officials from all 63 provincial Departments of Transport with tools such as the guide and iRAP's Star Rating for Schools assessment app. A study tour to Europe exposes decision-makers to international best practices. Infrastructure pilots at selected schools demonstrate the guide's effectiveness, and public awareness campaigns promote safer behavior in local communities.

Although field implementation began in April 2025, early progress has been significant. A kick-off meeting in Hanoi brought together government and development partners to align efforts and build momentum for national adoption. The first draft of the Safe School Zone Basic Standard has been completed and will support formal endorsement in mid 2026. Preparations for a national capacity-building workshop are underway, pending approval of the standard.



> ***Organizing the SSZ Guide and Star Rating for Schools (SR4S) training workshop is one of the most important and practical activities. Through this workshop, each organization and individual can gain experience and apply it to improve traffic infrastructure and management in school areas, contributing to safer roads for every family and society.***

Hoang The Tung
Deputy Director of Transportation and Road Safety Department at the Ministry of Construction of Viet Nam

Key takeaways include the importance of legal frameworks for systemic change, the value of integrated solutions combining policy, training, and infrastructure and the role of regional leadership in scaling impact. Above all, the project reinforces that child safety is a shared responsibility between governments and communities.

Contact:

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Guiding officials to conduct a school zone assessment using the Safe School Zone Guide during the capacity-building training held in Da Nang, Viet Nam, 7-8 August 2025.



Climate Resilient and Inclusive Social Protection

Partners:

National governments of Cambodia, China, Fiji, Indonesia, Mongolia, Pakistan, the Philippines, Sri Lanka, Thailand and Viet Nam; Women in Informal Employment: Globalizing and Organizing (WIEGO); United Nations Resident Coordinator Offices

Objective:

To strengthen climate-resilient social protection systems that leave no one behind by integrating climate and social protection policies, building data-driven capacity, and fostering regional cooperation.

Period

2025-2028

Target Countries:

Cambodia, China, Fiji, Indonesia, Mongolia, Pakistan, Philippines, Sri Lanka, Thailand, Viet Nam

Funding Source:

- 2030 Agenda for Sustainable Development Sub-Fund under the UN Peace and Development Fund
- United Nations Regular Programme for Technical Cooperation

Climate shocks are increasingly frequent in Asia and the Pacific, threatening livelihoods, health and development across the region. Informal workers, women and marginalized households face the greatest risks, yet social protection systems remain fragmented, underfunded and poorly aligned with climate policies.[26] Many national climate plans make little reference to social protection, and coordination between relevant agencies is rare. Without timely data and evidence, governments struggle to anticipate which communities will be hit hardest or to design policies that leave no one behind.

[26] ESCAP. Protecting our Future Today: Social Protection in Asia and the Pacific. Social Outlook for Asia and the Pacific. 2024. https://repository.unescap.org/server/api/core/bitstreams/27224ede-c0ca-4067-a792-3b63e45f6a3f/content

To address these gaps, ESCAP launched a regional initiative to strengthen climate-resilient social protection systems. Five beneficiary countries are mapping pathways to integrate social protection with climate action, guided by assessments of risks, vulnerabilities and policy gaps. ESCAP is also developing a user-friendly data tool to model the impact of climate events and policy interventions on vulnerable groups, applying Leave No One Behind analysis to identify those furthest behind.

Regional workshops and a collaborative roadmap are fostering South-South cooperation, sharing best practices and building consensus on inclusive social protection. The Climate Resilient and Inclusive Social Protection (CRISP) platform on ESCAP's Social Protection Online Toolbox (SPOT) portal is expteced to provide policymakers, practitioners and partners with access to data tools, guidance and country-level findings. Engagement with informal worker networks, women's organizations and national ministries ensures local ownership and strengthens coordination.

By 2028, at least three countries are expected to adopt national pathways outlining social protection measures to buffer climate impacts and support just transitions. Policymakers will be trained to use data tools to identify vulnerable groups and simulate the effects of climate policies. Early progress includes Cambodia becoming one of the first countries globally to include social protection as a dedicated sector in its NDC 3.0 submission, demonstrating strong national commitment.

The initiative has also received high-level endorsement, including a national launch in Indonesia with the Vice Minister for National Planning and the UN Resident Coordinator.

> *This collaboration between the Indonesian Ministry of National Development Planning and ESCAP will serve as a strategic platform to strengthen our joint capacity and promote the exchange of best practices in sustainable development planning that is both climate-responsive and data-driven.*
>
> **H.E. Febrian Alphyanto Ruddyard**
> Vice Minister of National Development Planning, Indonesia

With accessible data, strengthened capacity and regional collaboration, countries are transforming social protection into a tool for climate resilience. Integrating climate and social protection policies allows governments to better safeguard vulnerable households, support inclusive recovery and ensure women, informal workers and marginalized communities are at the center of planning for a safer, more equitable future.

Read more:

CRISP

ESCAP. Protecting our Future Today: Social Protection in Asia and the Pacific. Social Outlook for Asia and the Pacific. 2024.

Linking Climate Action and Social Protection

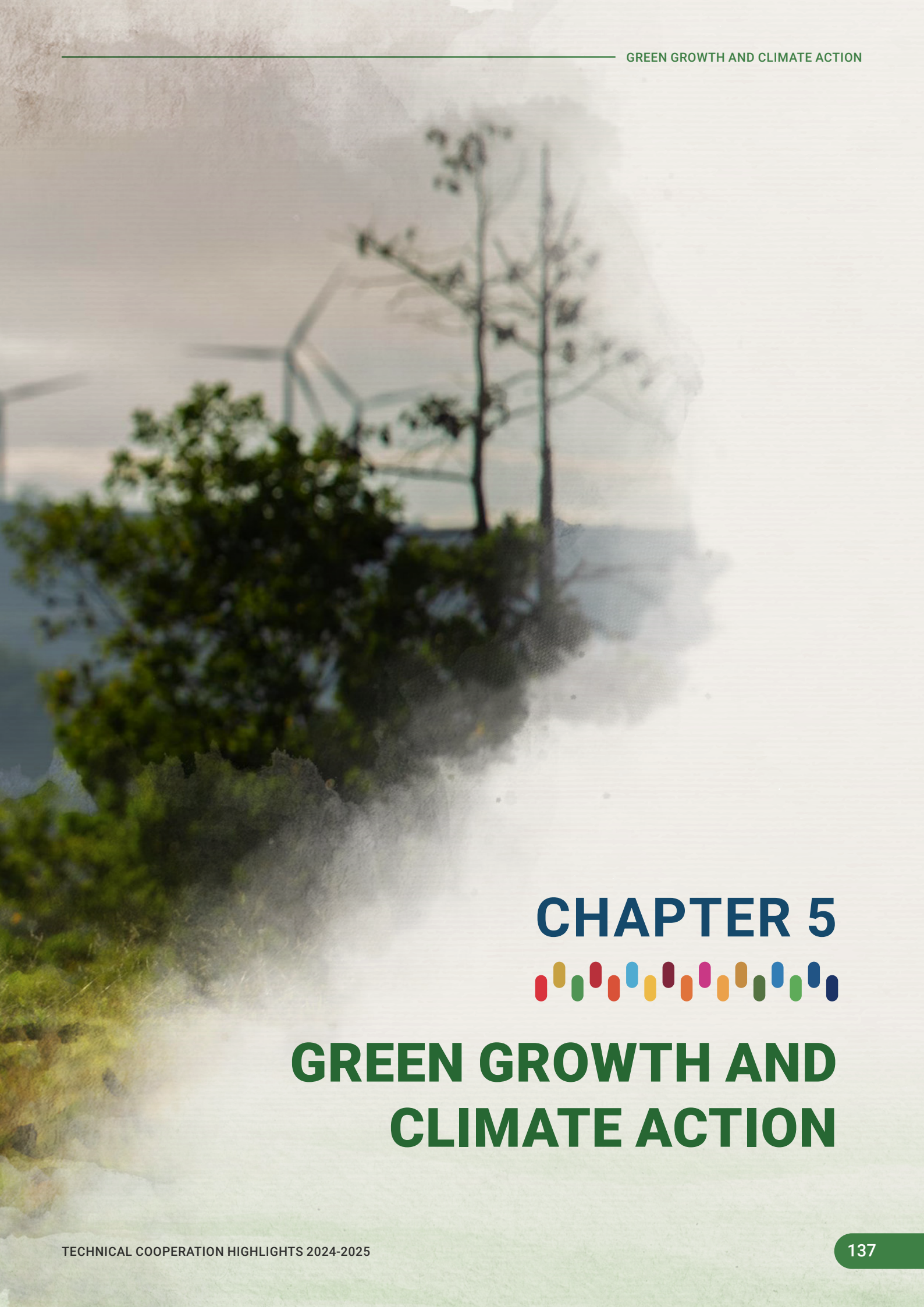
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CHAPTER 5

GREEN GROWTH AND CLIMATE ACTION

Asia and the Pacific faces a defining tension. With 4.6 per cent expansion of economic activity in 2024, the region remains the fastest-growing globally, contributing around 60 per cent of global GDP growth over the decade to 2025.[27] Yet behind this economic velocity lies a growing imbalance: the climate crisis deepens vulnerability, increases disasters and associated losses and widens the gap for countries seeking to free themselves from escalating debt burdens.[28]

Many countries therefore face a dual imperative: to accelerate climate action while sustaining economic growth, creating jobs and reducing inequality. For vulnerable country groups, including least developed countries (LDCs), small island developing States (SIDS) and landlocked developing countries (LLDCs), the stakes are particularly high, as climate impacts threaten to reverse hard-won development gains. Green growth offers a pathway to align climate action with economic transformation, resilience and long-term sustainability. Rather than treating environmental protection as a constraint on development, green growth recognizes that climate action can drive innovation, create new industries and decent jobs, improve public health and enhance competitiveness. It encompasses integrated approaches linking energy transition and efficiency, low-carbon transport systems, climate-resilient food systems and green and smart urban development.

Effective climate action requires integrated solutions combining policy reform, technology deployment, capacity development and institutional change. The urgency is particularly acute in sectors such as transport, which accounts for 23 per cent[29] of global energy-related CO_2 emissions, and cooling, where surging demand threatens to escalate energy costs and greenhouse gas emissions.

As the most comprehensive intergovernmental platform in Asia and the Pacific, ESCAP translates global climate commitments, including Nationally Determined Contributions (NDCs) under the Paris Agreement and the Global Cooling Pledge, into regional and national action. This encompasses multiple dimensions: strengthening policy and institutional frameworks for NDC implementation, energy transition and sustainable cooling; advancing sectoral transformation through technical cooperation on sustainable cooling, electric mobility, green freight, renewable energy and climate-resilient urban development; and building capacity through regional dialogues, feasibility studies, pilot projects and training programmes. ESCAP facilitates peer learning and harmonization through platforms such as the Seoul Initiative Network on Green Growth (SINGG) and the Asia-Pacific Initiative on Electric Mobility (APIEM).

Grounded in the 2030 Agenda, the Paris Agreement and regionally agreed action plans covering energy, transport and resilience, ESCAP's work is guided by cross-cutting principles of inclusion, resilience, sustainability and evidence-based policymaking, promoting coherent policy responses that address the interconnected nature of climate, energy, transport, cooling and urban systems.

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[27] [29] ESCAP, UNEP and UN Women (2025) Review of Climate Ambition in Asia and the Pacific: Readiness for NDC Implementation. Available at: https://repository.unescap.org/items/2cf11e71-5cb0-47a6-8ef1-0d40f63f7297

[28] ESCAP (2025) Transforming Energy Systems for a Low-Carbon Future in Asia and the Pacific. Available at: https://repository.unescap.org/server/api/core/bitstreams/814d1f10-e8d7-45df-98f2-8b1f3d8eb57d/content

Significant capacity gaps across policy, institutional, technical and analytical dimensions remain a constraint for many member States, particularly LDCs, SIDS and LLDCs. Tailored support for national climate strategies, sector-specific action plans, coordination mechanisms, emissions monitoring and transport feasibility studies addresses these gaps where they matter most.

The success stories in this chapter demonstrate how targeted technical cooperation translates climate ambition into tangible outcomes across NDC readiness, sustainable cooling, low-carbon transport, energy-efficient freight and resource governance throughout Asia and the Pacific.

Insights from our partners



H.E. PAK SOKHARAVUTH
Under Secretary of State, Ministry of Environment, Cambodia



Driving Green Freight:

Regional Roadmap for Energy Efficiency in Asia-Pacific Transport

Partners:

Government of the Sakhalin Region, Russian Federation; National Polytechnic University of Armenia, Armenia; Research and Design Institute of Transport and Communications (NIITK), Kazakhstan; University of Seoul, Republic of Korea

Objective:

To improve energy efficiency and reduce carbon emissions in freight transport across the Asia and the Pacific by developing regional strategies, building technical capacity, and fostering cross-country cooperation.

Period

2022-2024

Target Countries:

Asia-Pacific region

Funding Source:

Government of the Russian Federation

Freight transport in the Asia-Pacific region is accelerating alongside the region's booming economies, but it comes at a steep environmental cost: nearly 13.5 per cent of regional CO_2 emissions and more than half of the region's oil consumption.[30] With freight demand expected to triple by 2050,[31] this growth threatens progress towards sustainable development goals on energy, infrastructure and climate resilience. Although energy efficiency remains the most cost-effective way to curb emissions, adoption has been slow due to fragmented policies, limited technical expertise and a lack of coherent regional strategies.

[30] ESCAP calculation based on data from IEA CO2 Emissions from Fuel Combustion,. Available at: https://www.iea.org/subscribe-todataservices/co2-emissions-statistics

[31] DESA (2018) Interlinkages Between Energy and Transport, Policy Brief No. 16. Available at: https://sdgs.un.org/sites/default/files/2021-05/Policy%20 Brief%20on%20the%20Interlinkages%20between%20Energy%20and%20Transport.pdf

To address these challenges, ESCAP partnered with key institutions across the region to implement a three-pronged strategy. First, research and analysis assessed policy options for modal shift, vehicle efficiency, and advanced technologies including autonomous vehicles, alternative fuels and digital solutions. Second, consensus building led to the development of a Regional Roadmap towards Sustainable and Energy Efficient Freight Transport.

This roadmap was reviewed and adopted at the Regional Meeting in Kathmandu in August 2023 and subsequently reported to the Committee on Transport in November 2024. Third, capacity development involved four workshops in Seoul, Yerevan, Yuzhno-Sakhalinsk and Almaty, as well as an Expert Group Meeting in Tbilisi. Knowledge products, including a study report, policy briefs in English and Russian and a self-study manual, were published online for broad access.

Six countries (Azerbaijan, China, Kazakhstan, Malaysia, Thailand and Viet Nam) formulated or updated national action plans to enhance freight energy efficiency. The roadmap was presented at the Asia-Pacific Regional Dialogue on Sustainable Maritime Connectivity in Fiji and at the Green Freight Asia Webinar, reaching private sector stakeholders. Social inclusion was prioritized through a handbook on gender mainstreaming and empowering persons with disabilities in freight transport.

> *The Regional Meeting in Kathmandu effectively met its objectives through a well-structured programme, expert inputs and the sharing of good practices, resulting in commitments for practical implementation. Recognizing that freight energy efficiency depends on coordinated operational, technological, regulatory and behavioural measures, the Government of Nepal, together with freight forwarders and terminal operators, conducted a follow-up study to assess the sustainability of Nepalese dry ports and identify priority actions going forward.*
>
> **Rajan Sharma**
> President, Nepal Freight Forwarders Association

The project highlights how coordinated research, policy guidance and capacity-building can create measurable change in freight systems. Strong regional cooperation, practical tools and inclusive approaches are equipping governments and industry to cut emissions, improve energy efficiency and steer freight transport toward a more sustainable and equitable future.

Read more:

- Manual: Sustainable and Energy Efficient Freight Transport Sector
- Study report: Enhancing Energy Efficiency of the Freight Transport Sector in Asia and the Pacific

Policy Brief: Enhancing Energy Efficiency of the Freight Transport Sector in Asia and the Pacific (English)

Contact:

Transport Division

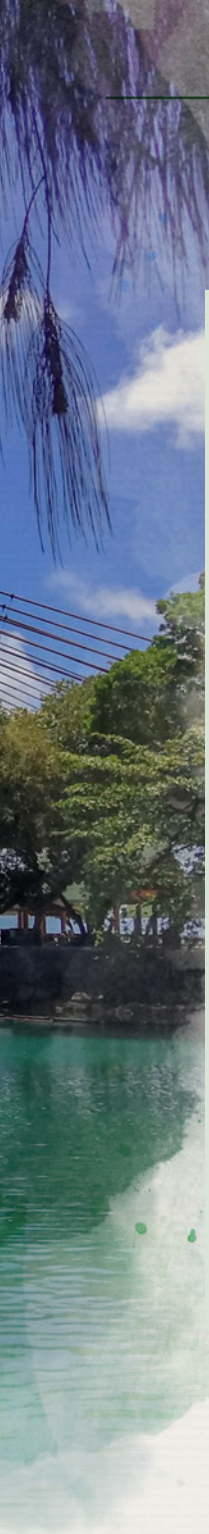
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Driving Change:

Smart Mobility Solutions for Sustainable Smart Cities in Pacific SIDS



Partners:

Ministry of Public Works, Meteorological Services, and Transport of Fiji; University of the South Pacific; Intelligent Transport Systems (ITS) New Zealand; Korea Institute of Civil Engineering and Building Technology

Objective:

To support Pacific small island developing States in adopting ICT-based transport solutions that enhance sustainability, safety, and resilience.

Period

2023-2025

Target Countries:

Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu

Funding Source:

Government of the Republic of Korea

Pacific small island developing States (SIDS) face urgent transport challenges from geographic isolation and limited infrastructure to increasing vulnerability to climate change, putting immense pressure on urban mobility systems. Congestion, rising emissions and safety risks are worsening, while scarce resources slow the modernization of transport networks. Smart mobility – using Information and Communication Technology (ICT)-driven solutions such as demand-responsive transport, ride-hailing and integrated public transport – offers a practical, cost-effective pathway to greener, safer and more inclusive cities. Yet awareness and technical capacity among policymakers remain limited, creating a critical barrier to adoption and leaving island populations at risk of falling behind in sustainable development.

To address these gaps, ESCAP partnered with regional and international experts to implement a multi-pronged strategy. Desk-based research and feasibility studies assessed smart mobility readiness in Suva, Nuku'alofa and Apia, combining open-source mapping data with local expertise to overcome data limitations. Policy guidelines were drafted to integrate these findings, embedding gender considerations and lessons from global case studies. Capacity-building activities included a national workshop in Fiji, two high-level side events during ESCAP's 80th Commission Session and Committee on Transport, and a subregional workshop in New Zealand where technical training and finalization of the guidelines took place. Engagement with Intelligent Transport Systems (ITS) associations, universities and government agencies strengthened partnerships to ensure long-term uptake and collaboration.

By 2025, the project had delivered four capacity-building events, exceeding initial targets, and prepared policy guidelines incorporating gender-responsive recommendations. Regional visibility of smart mobility increased, with sessions at the Commission and Committee highlighting its role in sustainable transport planning. Gender considerations were embedded throughout training modules and guidelines, promoting inclusive solutions. Collaboration with Pacific ministries and technical institutions enhanced expertise and mobilized resources for future initiatives.

> *"Smart mobility is not a luxury, but a practical and affordable solution for island cities facing climate and resource constraints. The guidelines and training have strengthened our ability to plan transport systems that are inclusive and future-ready."*
>
> **Workshop Participants**

> *"The workshops translated complex smart mobility concepts into tools we can apply in our own cities. It has significantly improved our confidence to integrate digital transport solutions into national planning."*
>
> **Workshop Participants**

Through research, policy guidance and hands-on capacity building, Pacific cities are now better equipped to implement smart, resilient transport solutions. Strengthened regional collaboration, inclusive design and practical tools allow island communities to reduce emissions, enhance safety and equity, and prepare urban mobility systems for future growth, ensuring that even the most remote cities can thrive in a changing climate.

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Green Recovery in Action:

Building Resilient Futures through Regional Cooperation

Partners:

Ministry of Climate, Energy and Environment, Republic of Korea; Korea Environment Corporation (KECO)

Objective:

To advance green growth, climate action and resilient recovery in the Asia-Pacific region through policy dialogue, pilot projects and capacity-building under ESCAP's Seoul Initiative Network on Green Growth (SINGG).

Period

2006-ongoing

Target Countries:

Asia-Pacific region, with pilot projects in Lao PDR, Mongolia and Nepal; Kazakhstan and Bangladesh

Funding Source:

Government of the Republic of Korea

COVID-19 exposed deep vulnerabilities across Asia-Pacific economies and ecosystems, highlighting the urgency of recovery strategies aligned with climate goals and the SDGs. Many countries entered the recovery phase without the policy frameworks, technical tools or institutional capacity needed to embed environmental priorities into national planning. At the same time, persistent challenges, from biodiversity loss and waste management to air pollution and climate adaptation, required stronger and more coordinated regional responses.

Through the Seoul Initiative Network on Green Growth (SINGG) Phase IV (2021-2025), ESCAP advanced a platform combining policy dialogue, technical assistance and pilot action. During the partnership period, the 16th to 20th Annual SINGG Policy Consultation Forums convened experts and officials from 32 member States to exchange best practices on nationally determined contributions (NDCs), carbon neutrality and green recovery strategies. The 20th Forum in 2025 marked 20 years of SINGG and 10 years of the Paris Agreement, reaffirming the importance of sustained regional cooperation.

Country pilots translated dialogue into practical outcomes. In Lao PDR, support for the NDC 3.0 roadmap included greenhouse gas (GHG) emission modelling and inter-ministerial consultations, alongside strengthened chemical accident response capacity through training and a response manual. In Nepal, assessments in Rasuwa district evaluated carbon sink potential and produced action plans to scale up the Carbon-Neutral Village concept. In Mongolia, research on heat-only boilers generated 13 recommendations to reduce GHG and air pollutant emissions. Capacity-building reinforced these efforts. Training in the Republic of Korea strengthened expertise in GHG inventory methodologies and waste-to-resource systems. In the Philippines and Fiji, local authorities received technical guidance and tools to improve GHG inventories and waste management. Since 2021, 11 policy briefs and nine newsletters have supported knowledge-sharing on mitigation, biodiversity conservation and chemical safety.

Across the region, these efforts are delivering results. In Lao PDR, NDC 3.0 proposals were integrated into national processes, and the chemical accident response pilot scaled into a multi-year official development assistance project. In Mongolia, recommendations informed a broader heating-sector emissions reduction initiative. Regionally, strengthened networks have enabled peer learning and greater integration of gender considerations into green recovery planning.



Group photo during the capacity-building workshop under the Carbon Neutral Village project in Syafrubesi, Nepal, 24 December 2024.



As a SINGG project recipient, the initiatives being done by the Korea Environment Corporation and other partner institutions align with global sustainability goals and demonstrate proactive leadership in addressing climate change.

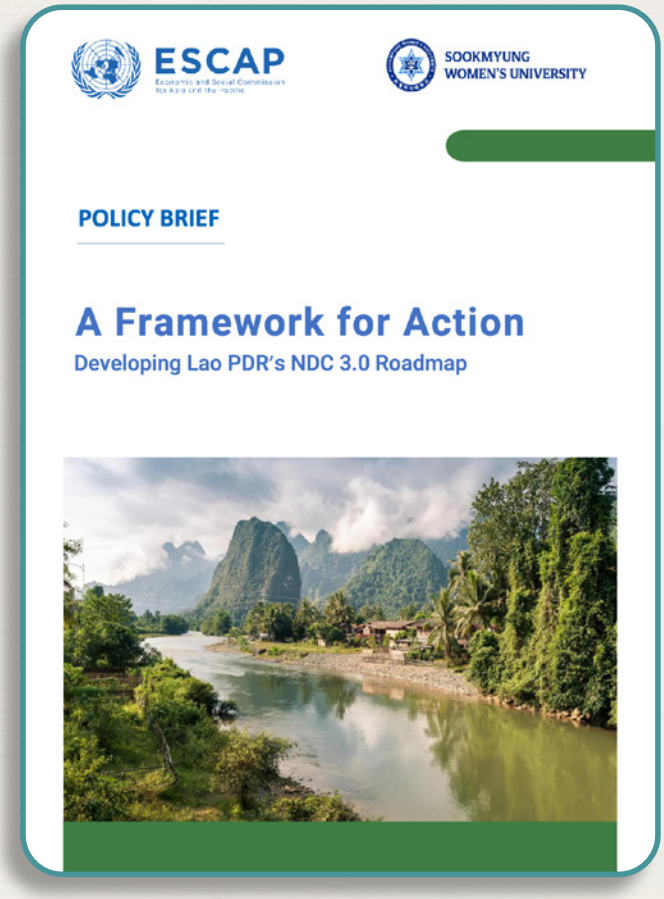
Mildred B. Maglaya
Department of Economy, Planning, and Development of the Philippines

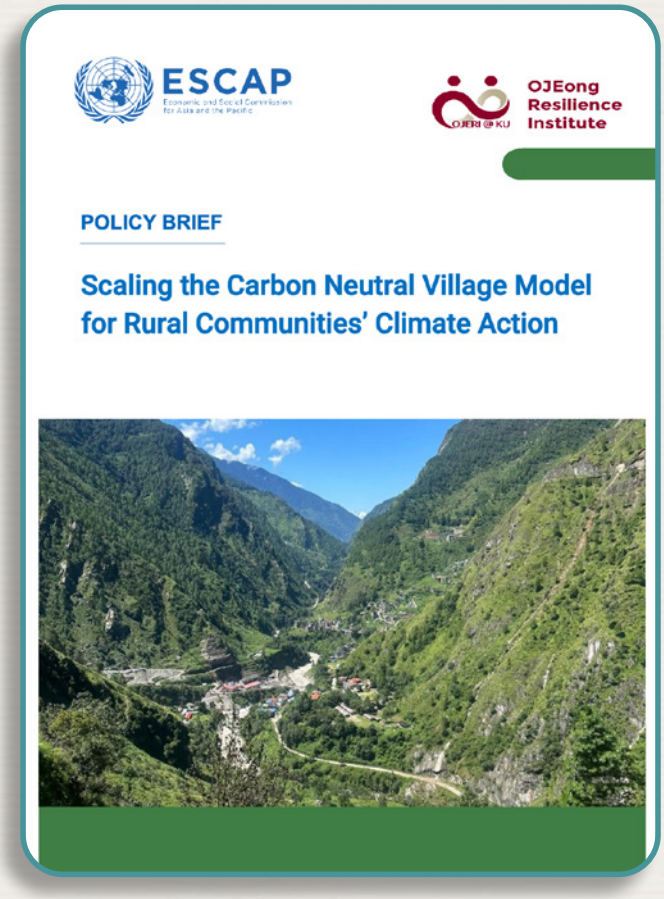
SINGG connects policy dialogue, pilots and knowledge exchange to help countries turn recovery into opportunities for transformation, strengthening resilience, advancing climate commitments and accelerating low-carbon development across the Asia-Pacific region.

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Cover photos of the ESCAP policy briefs.



From Global Commitments to Regional Action:

Advancing Environmental Rights in ASEAN and the Pacific

Partners:

ASEAN Intergovernmental Commission on Human Rights (AICHR); Pacific Islands Forum; United Nations Environment Programme (UNEP); United Nations High Commissioner for Human Rights (OHCHR)

Objective:

To advance the recognition and implementation of the human right to a clean, healthy and sustainable environment in South-East Asia and the Pacific through coordinated regional action.

Period

2023-2025

Target Countries:

Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Singapore, Thailand and Viet Nam; Pacific Islands Forum members

Funding Source:

Government of Sweden

In 2022, the UN General Assembly recognized the human right to a clean, healthy and sustainable environment through resolution 76/300. However, implementation across Asia and the Pacific has remained uneven. While 24 countries in the region enshrine this right in their constitutions, 17 have no formal legal recognition. Procedural elements, such as access to information and justice and public participation, are often weak, limiting effective environmental governance. Unlike Europe and Latin America, the Asia-Pacific region lacks a dedicated regional legal instrument to guarantee these rights.

To bridge this gap, ESCAP established an Environmental Rights Task Force together with UNEP and OHCHR, adopting a coordinated "One UN" approach. The initiative provided technical and policy support to advance environmental rights at the subregional level, particularly within ASEAN.

A series of working sessions supported the establishment and operation of the ASEAN Environmental Rights Working Group. Through technical assistance and consultations, the Working Group developed the "ASEAN Declaration on the Right to a Safe, Clean, Healthy, and Sustainable Environment." Following review by ASEAN bodies, the Declaration was formally adopted by ASEAN leaders at the 47th ASEAN Summit in Kuala Lumpur in October 2025.The Declaration represents a landmark regional commitment. It aligns with General Assembly resolution 76/300 and recognizes a safe, clean and sustainable environment as a fundamental human right. It addresses both procedural elements and substantive dimensions, including clean air, a safe climate, healthy ecosystems, sufficient water, sustainable food systems and a non-toxic environment. It also highlights protections for vulnerable groups and affirms responsibilities for present and future generations, businesses and non-State actors.

In the Pacific, the project convened its first regional consultation at the Pacific Islands Forum Secretariat in Suva in November 2025, exploring pathways to strengthen recognition and implementation of environmental rights across the Blue Pacific.

> ***We welcomed the adoption of the ASEAN Declaration on the Right to a Safe, Clean, Healthy, and Sustainable Environment… in advancing environmental governance, including through safeguarding the right to a healthy environment.***
>
> **Chairman's Statement of the 15th ASEAN–United Nations Summit (2025)**



Ad-hoc Preparatory Session for the ASEAN Environmental Rights Framework and Interim Working Group Meeting in Bangkok, Thailand, 22-23 November 2022.

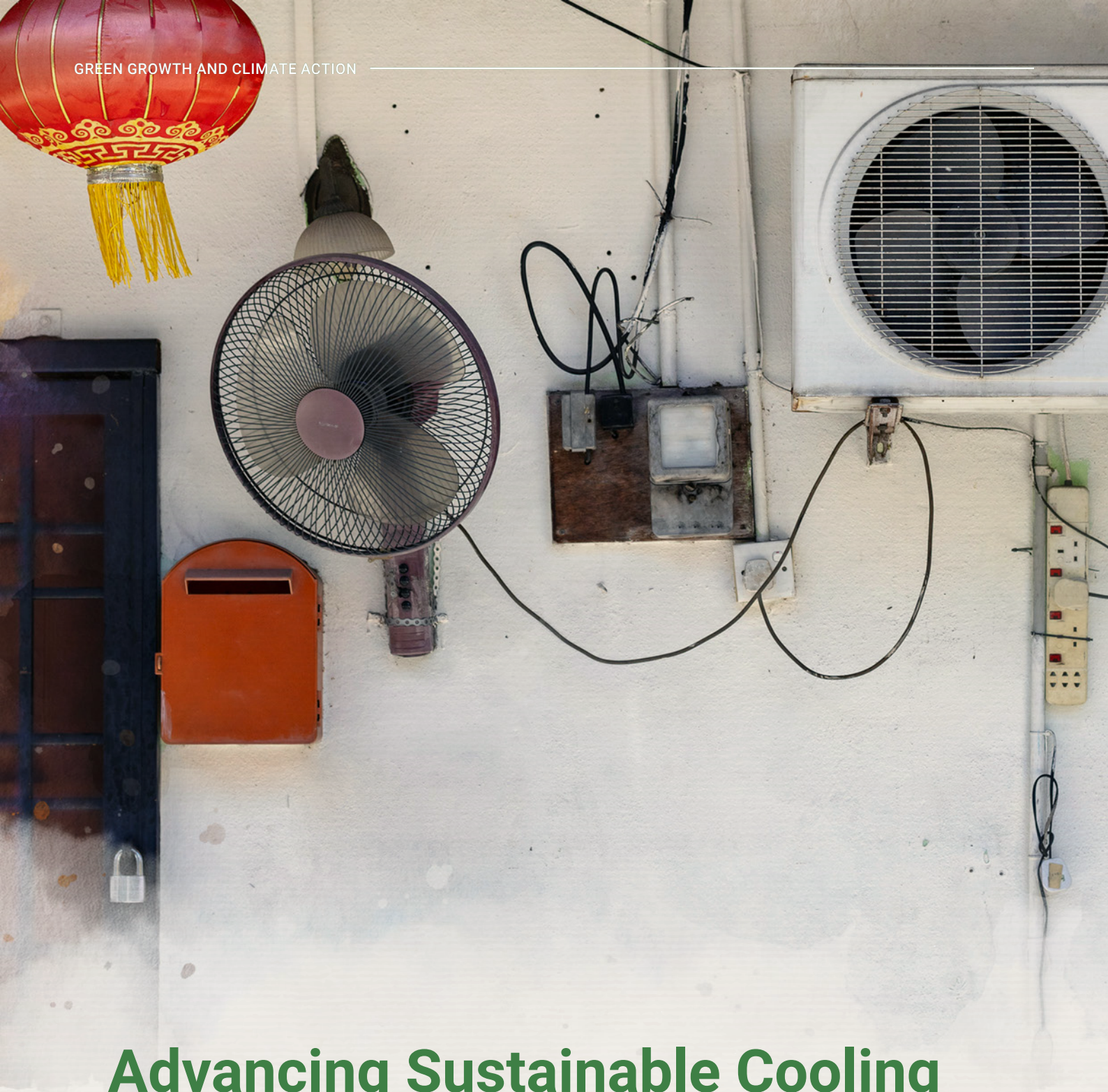
By translating global recognition into concrete regional commitments, this initiative demonstrates how coordinated UN support can strengthen environmental governance and human rights across Asia and the Pacific.

Contact:

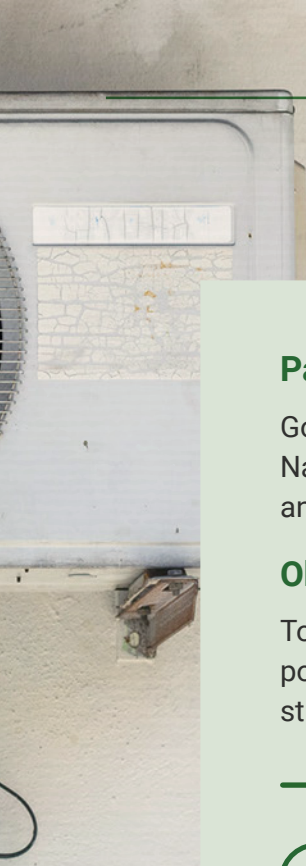
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Advancing Sustainable Cooling Through National Action



Partners:

Governments of Cambodia, Indonesia, Solomon Islands and Viet Nam; United Nations Environment Programme (UNEP); Energy Transition Partnership (ETP); and national and regional technical partners.

Objective:

To support countries in developing and implementing sustainable cooling policies and action plans that reduce energy demand and emissions while strengthening climate resilience and thermal comfort.

Period

2022-2026

Target Countries:

Cambodia, Indonesia, Solomon Islands and Viet Nam

Funding Source:

- Energy Foundation
- United Nations Development Account

Rising temperatures, worsening urban heat, and growing demand for space cooling are increasing pressure on energy systems, household budgets and public health across Asia and the Pacific. In response, ESCAP has worked with governments and partners to strengthen the policy foundations for sustainable cooling through National Cooling Action Plans (NCAPs) and follow-on implementation support. Rather than treating cooling as a narrow technology issue, this work has helped position cooling as a cross-cutting policy priority linked to energy efficiency, climate mitigation, adaptation, urban resilience and sustainable development.

Cambodia has served as a strong example of how early policy support can catalyse broader transformation. In 2022, ESCAP and UNEP supported the development of Cambodia's National Cooling Action Plan, which established a national evidence base on cooling demand, energy use and emissions, and identified priority policy actions across buildings, appliances and urban development. That work helped create the foundation for subsequent implementation efforts. Building on the NCAP, ESCAP and UNEP supported Cambodia in 2024 and 2025 to advance passive cooling strategies through technical analysis, stakeholder engagement, pilot demonstration and the development of the Guidelines for Passive Cooling Strategies in Cambodia. These efforts helped strengthen awareness of how building design and urban form can reduce cooling demand while improving comfort and resilience. The momentum generated through this work has also contributed to a new phase of support on building energy codes in Cambodia, led by ESCAP with local and regional partners, helping translate sustainable cooling objectives into longer-term regulatory and market transformation.

In Indonesia, ESCAP and UNEP supported the development of Indonesia's National Cooling Action Plan, which was officially launched in 2024. The plan provided a national framework for reducing cooling-related energy demand and emissions while improving resilience to rising temperatures across key sectors. Its launch marked an important milestone in embedding sustainable cooling within national policy planning.

> ***"The launch of Indonesia's National Cooling Action Plan marks a crucial step in our commitment to protect our people from extreme heat with climate-friendly cooling solutions. This National Cooling Action Plan will serve as a systematic and comprehensive framework to realize lower energy demand and emissions while improving the resilience of our population and economic sectors."***
>
> **Eniya Listiani Dewi**
> Director General of the Directorate General of New, Renewable Energy, and Energy Conservation (EBTKE) under the Ministry of Energy and Mineral Resources, Indonesia

ESCAP also contributed to the development of Viet Nam's National Cooling Action Plan, which was launched in 2025. In Viet Nam, the process was led by the Energy Transition Partnership (ETP). Together with the work in Cambodia and Indonesia, this reflected growing regional momentum to integrate cooling more systematically into national energy and climate policy frameworks.

In 2025, ESCAP also expanded this work to the Pacific by launching a new effort to support the development of a National Cooling Action Plan for the Solomon Islands. This marked an important step in extending sustainable cooling cooperation to Pacific island contexts, where cooling needs are rising and energy systems face unique cost and resilience challenges.

Developing and implementing a National Cooling Action Plan is critical to strengthening our resilience to rising temperatures and extreme weather.

Christopher Vehe Sagapoa
Permanent Secretary of the Ministry of Mines, Energy and Rural Electrification in the Solomon Islands

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Building ASEAN's Minerals Development Vision:

Driving Sustainable Resource Development for the Energy Transition

Partners:

ASEAN Secretariat; World Bank; Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF); United Nations Economic Commission for Europe (UNECE)

Objective:

To support ASEAN Member States in advancing the ASEAN Minerals Development Vision (AMDV) and operationalizing the ASEAN Principles on Sustainable Minerals Development (APSMD), strengthening sustainable, inclusive and ESG-aligned critical minerals governance for the energy transition.

Period

2024-2025

Target Countries:

ASEAN Member States

Funding Source:

Government of the United Kingdom

The global energy transition is accelerating demand for critical raw materials such as nickel, cobalt, lithium and copper. ASEAN plays a central role in this shift. Several Member States are major producers, while growing clean energy ambitions are also increasing domestic demand. This dual role presents significant opportunity – but also risk. Without coordinated policies and shared standards, the region could face fragmented governance, environmental and social pressures, and missed opportunities to attract responsible investment.

In 2023, ASEAN Member States adopted the ASEAN Principles on Sustainable Minerals Development (APSMD), affirming their commitment to responsible and inclusive resource governance. The next step was translating these principles into an actionable regional strategy. To support this effort, ESCAP partnered with the ASEAN Secretariat and international knowledge institutions to advance the ASEAN Minerals Development Vision (AMDV), a framework to guide sustainable minerals development and strengthen ASEAN's contribution to energy transition technologies.

A key milestone was reached in February 2025 in Jakarta, where ESCAP co-organized a stakeholder engagement workshop that expanded ASEAN's minerals dialogue beyond mining authorities. For the first time, representatives from trade, finance and other line ministries participated, reflecting the cross-cutting nature of minerals governance and its links to industrial policy and sustainable finance. Discussions focused on mineral market trends, ASEAN's strategic positioning and integration of APSMD principles into the ASEAN Minerals Cooperation Action Plan (2026–2030).

Participants refined the draft AMDV and agreed on its core elements and roadmap toward endorsement at the 10th ASEAN Ministerial Meeting on Minerals in late 2025. The process strengthened cross-sector coordination and reinforced alignment with environmental, social and governance standards. A follow-up consultation with industry and civil society took place in for May 2025 to broaden stakeholder engagement.

By building consensus around a shared vision, the partnership has strengthened ASEAN's capacity to manage critical minerals strategically, attract sustainable investment and embed environmental, social and governance principles into minerals governance, ultimately supporting a just and resilient energy transition.

> *"We would like to express our sincere appreciation to ESCAP for the continued collaboration in supporting ASEAN minerals cooperation. We look forward to continuing this constructive partnership with ESCAP and to working closely together in advancing ASEAN's sustainable and inclusive minerals agenda."*
>
> **Rabiah Al Adawiyah T. Hussein**
> Senior Officer (Minerals), Energy and Minerals Division, ASEAN Economic Community Department

Through coordinated policies, cross-sector collaboration and a commitment to responsible and inclusive governance, the region is transforming critical minerals from a resource challenge into a strategic opportunity.

Read more:

- ASEAN Principles for Sustainable Minerals Development
- ASEAN Minerals Development Vision
- ASEAN Minerals Cooperation Action Plan (AMCAP-IV) 2026-2030

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ANNEX

List of Donors in 2024-2025

BILATERAL DONORS

- Australia
- Bangladesh
- Brunei Darussalam
- Cambodia
- China
- Colombia
- Fiji
- France
- Germany
- Hong Kong, China
- India
- Indonesia
- Iran (Islamic Republic of)
- Italy
- Japan
- Kazakhstan
- Macao, China
- Malaysia
- Maldives
- Mongolia
- Pakistan
- Philippines
- Republic of Korea
- Russian Federation
- Samoa
- Singapore
- Sri Lanka
- Sweden
- Switzerland
- Thailand
- Timor-Leste
- Tonga
- Tuvalu
- United Kingdom
- Viet Nam

UNITED NATIONS

- United Nations Department of Economic and Social Affairs
- UN Road Safety Trust Fund
- UN Women Regional Office for Asia and the Pacific
- United Nations Development Programme, Bangladesh
- United Nations Office for Project Services - Enhanced Integrated Framework
- United Nations Office for Project Services - Nationally Determined Contribution Partnership Action Fund
- United Nations Office for Project Services - Southeast Asia Energy Transition Partnership

OTHER ORGANIZATIONS

- AARP
- Aerospace Information Research Institute, Chinese Academy of Sciences
- Agricultural Research Centre for International Development
- ASEAN-Japan Centre
- Asian Infrastructure Investment Bank
- Bill and Melinda Gates Foundation
- Bloomberg Family Foundation Inc
- China Southern Power Grid
- Clean Air Fund
- ClimateWorks Foundation

- Energy Foundation
- Environmental Defense Fund
- European Climate Foundation
- Global Green Growth Institute
- International Centre of Excellence on Sustainable Resource Management
- International Development Research Centre
- International Islamic Trade Finance Corporation
- International Labour Organization
- International Maritime Organization
- International Organization for Migration
- Islamic Development Bank
- Joint Sustainable Development Goals Fund
- Korea Maritime Institute
- Korea Ports and Harbours Association
- Korean Federation of Community Credit Cooperatives
- Rehabilitation International
- The Rockefeller Foundation
- Seoul National University
- Sequoia Climate Foundation
- Temasek Foundation

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