

Background Study for Exploring APEC's Path Towards Empowering Sustainable Green Growth

APEC Economic Committee

August 2026



**Asia-Pacific
Economic Cooperation**



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Executive Summary

Purpose and scope of the report

This report examines the Asia-Pacific Economic Cooperation's (APEC) ever-evolving path towards empowering sustained economic growth. Through assessing the multitude of strategies employed by the 21 APEC economies to promote sustained economic growth, this study undertakes to achieve the following objectives:

1. Provide a consolidated view of sustained economic growth priorities and challenges across the APEC economies;
2. Identify practices, policies, and innovations employed by APEC economies, with a focus on five case studies; and
3. Highlight cross-cutting themes and propose potential solutions that can help economies scale sustained economic growth

The importance of sustained economic growth to APEC as an economic development strategy

APEC economies are exposed to the impacts of extreme weather-related economic disruptions, including extreme weather events, sea-level rise, droughts, floods, and other natural disasters. Notably, around 70% of the world's natural disasters occur within the APEC region¹, affecting economic stability, supply chains, infrastructure, food security, and the livelihoods of millions. This impact is further expounded by the fact that the world's leading producers of critical commodities such as lithium, copper, and zinc, are all APEC economies², resulting in extreme weather-related disruptions extrapolating down the supply chain.

As one of the world's most dynamic and diverse economic groups, APEC faces the dual challenge of maintaining robust economic expansion while addressing rising environmental pressure. Sustained economic growth policies that drive economic development while simultaneously enhancing resilience to environmental risks such as resilient infrastructure and technologies are thus key in addressing systemic vulnerabilities while retaining competitiveness and favourable rates of economic growth.

Key findings

Mobilising transition finance

Access to finance is a foundational enabler and catalyst of sustained economic growth strategy. Steps towards economic resiliency without undermining energy security,

¹ APEC, [APEC and Weather-related economic disruptions](#), 2021

² PwC, [Climate Risks to Essential Commodities: What Business Leaders Need to Know](#)

economic growth, and affecting the wellbeing of the population, as well as by scaling resilient infrastructure and technologies - all require significant capital expenditure.

However, for most economies, high-risk investments in emerging sectors remain limited by a disproportionate gap in private capital as compared to public investment. To close financing gaps and de-risk investments, economies should leverage financial mechanisms such as blended and transition finance. Robust frameworks and clear guidelines can further enhance stability and investor confidence, helping to catalyse flows of private capital.

Policy alignment, coherence, and certainty

Clear and coherent policy frameworks—underpinned by transparency, robust standards, and long-term certainty—are pivotal for attracting investment and fostering innovation. Proactive and forward-looking leadership supported by consistent and pragmatic long-term policy frameworks are common among economies with strong economic growth strategies that are integrated across ministries and aligned with broader policy priorities, enabling more effective and intentional policymaking.

Knowledge-sharing and capacity-building

Especially the case for emerging sectors where technology and technical expertise are still evolving, developing a future-ready workforce equipped with the necessary skills are essential for operationalising the green economy. Sectors such as innovative technologies and emerging metals require highly specific technical expertise, with a rapidly developing literature on best practices.

By fostering platforms for knowledge-sharing—for example, skills-mapping, technical exchanges, and regional centres of excellence—APEC can accelerate the transfer of innovative solutions across diverse contexts.

Research methodology

The analytical framework for this report draws on principles reflected across globally recognised frameworks on sustained and long-term economic growth. These frameworks emphasise the integration of economic development, resource efficiency, and innovation. A detailed landscape review was conducted of all relevant policies, frameworks, and materials across the 21 APEC economies, aimed at mapping current priorities, initiatives, and approaches to sustained economic growth. The review took reference from economy-wide development plans and publicly available reports from government agencies, regional organisations, and global institutions, including APEC.

To complement the secondary research and gain deeper insight into the practical constraints and opportunities experienced by policymakers, a quantitative survey exploring key barriers faced in achieving sustained economic growth was conducted.

The report includes case studies focusing on five APEC economies. A sector-specific lens was adopted to illustrate the different policy pathways economies have adopted to promote sustained economic growth. The case studies in focus are:

- Australia, on industrial transformation;
- Canada, on clean technology;
- Republic of Korea, on digitalisation;
- Peru, on infrastructure development;
- Singapore, on sustainable finance

Crucially, policy implementation is multifaceted, depending on a range of economic, social, technological, and economy-specific factors; it is deeply influenced by local contexts such as the access to resources.

A full list of key project contributors who participated in the primary research can be found in the Appendix.

Chapter 1: Introduction & background

By 2035, an additional 600 million people are expected to reside in Asia-Pacific economies, intensifying traffic congestion, air pollution, and energy consumption. These pressures are compounded by the region's exposure to extreme weather-related impacts, which pose challenges to long-term economic stability. Faced with unprecedented urbanisation, rising energy demand, and escalating environmental pressures, APEC's pursuit of sustained economic growth reflects a strategic imperative to future-proof regional prosperity.

APEC has expressed its commitment to sustained economic growth since the first APEC Economic Leaders' Statement delivered in November 1993³, which affirmed that ensuring a more secure future for its people requires APEC economies to “protect the quality of our air, water and green spaces and manage our energy resources and renewable resources.”⁴

*The APEC Putrajaya Vision 2040*⁵ lists strong, balanced, secure, sustainable and inclusive growth as one of three key economic drivers, alongside trade and investment as well as innovation and digitalisation. Subsequently, the Aotearoa Plan of Action⁶ outlined individual and collective actions towards achieving the Putrajaya Vision 2040.

Anchored in its core agenda of trade and investment liberalisation, APEC's sustained economic growth strategy seeks to double the share of renewables from 2010 levels by 2030⁷, followed by a 45 per cent reduction in energy intensity from 2005 levels by 2035⁸, while also lowering trade barriers for environmental goods and services. This not only supports energy security and emissions reduction, but also strengthens regional resilience against economic shocks, demographic shifts, and global disruptions, thereby positioning APEC economies for sustained economic growth.

According to research by the Institute of Southeast Asian Studies (ISEAS), key deliverables in the APEC model of sustained economic growth are as follows: an improvement in energy efficiency; a reduction in tariff barriers for environmental goods and services; and the promotion of low-carbon goods and technologies in member economies. These centre on the adoption of low-carbon, energy-efficient technologies while minimising negative environmental consequences associated with industrialisation and reducing environmental trade barriers⁹.

³ [Asia-Pacific Economic Cooperation \(APEC\), 1993 Leaders' Declaration, Blake Island, Seattle, United States, November 20, 1993](#)

⁴ [APEC, “Sustainable Development,” updated April 2023](#)

⁵ [APEC, 2020 Leaders' Declaration – Annex A, Kuala Lumpur, Malaysia, November 20, 2020.](#)

⁶ [APEC, Aotearoa Plan of Action](#)

⁷ [APEC, “APEC Targets Doubling of Energy security,” press release, November 21, 2014.](#)

⁸ [APEC, 2011 Leaders' Declaration, Honolulu, United States, November 12, 2011.](#)

⁹ [Institute of Southeast Asian Studies \(ISEAS\), ISEAS Perspective 2013/10, Singapore: Institute of Southeast Asian Studies, 2013.](#)

1.2 Defining Sustained Economic Growth

For the purposes of this report, sustained economic growth is defined as a development strategy that aims to foster economic growth and development while ensuring environmental sustainability. It integrates environmental considerations into economic policy to ensure that natural resources are used efficiently, ecosystems are protected, and future generations' needs are not compromised.

Grounding our definition of sustained economic growth in globally recognised frameworks establishes a common foundation that reflects both global ambitions and APEC's regional priorities, giving the report a structured lens through which member economies can benchmark progress, identify synergies, and evaluate pathways for sustained economic growth.

While economy-wide strategies vary across APEC, there is strong convergence around six priority areas of sustained economic growth, representing common themes where economies' efforts overlap and align. The following table (Table 1) maps out the six thematic growth areas.

<i>No.</i>	<i>Thematic Growth Area (TGA)</i>	<i>Definition</i>
1	Managing extreme weather-related economic disruptions	Safeguarding energy security and transition to maintain economic productivity and resilience to extreme weather-related disruptions
2	Resource efficiency	Using resources such as energy, water, and raw materials more efficiently to reduce waste and environmental impacts
3	Energy security	Promoting the use of a diverse range of energy sources to strengthen energy security and system resilience
4	Efficient materials management	Encouraging recycling, reusing, and repurposing materials, and designing products with the intent to minimise waste and prolong their life cycles
5	Technological innovation	Supporting the development and adoption of innovative technologies that improve environmental performance, such as electric vehicles, farming techniques, and resource-efficient manufacturing processes
6	Opportunities for all	Ensuring that economic growth benefits everyone, reducing poverty and inequality while also creating green jobs and promoting social well-being.

Chapter 2: The current state of sustained economic growth in APEC

The chapter begins by classifying APEC member economies by their dominant economic sectors to identify the structural differences that may shape sustained economic growth priorities.

It then examines economies' sustained economic growth strategies, where the scope of policies is defined according to the economy's overall sustained economic growth goals and targets. In the review, greater analytic weight is given to goals that are explicitly prioritised by the economy. These goals are then categorised according to the six thematic growth areas, situating them within the broader context of each economy.

Finally, the chapter identifies the key enablers to the success of sustained economic growth policies, barriers to implementation of these policies, and recognises that challenges are shaped by each economy's circumstances while still often falling into a few broad categories.

The quantitative findings from this section draw on inputs from the contributing economies listed on the Appendix and is supplemented by publicly available information through desktop research.

2.1 Differentiated pathways for sustained economic growth: The Five-Sector Model

Given the diverse economic profiles and development trajectories across APEC economies, a one-size-fits-all assessment of sustained economic growth strategies can overlook critical structural differences that shape policy priorities and implementation pathways.

To address this, a sector-based approach is employed to analyse how the dominant economic sectors in each economy – whether primary (resource extraction), secondary (manufacturing), tertiary (services), or quaternary (knowledge-based) – influence the design, focus, and effectiveness of sustained economic growth policies. This four-sector framework is grounded in the proposed expansion to the Clark Sector Model by Jean Gottman in 1961¹⁰ and the further formalisation of these categories by Kenessey (1987)¹¹ in his seminal work to analyse the evolving structure of modern economies, particularly to capture the growing importance of knowledge-based activities and inform sector-specific economic and policy planning.

¹⁰ Selstad, T., *The rise of the quaternary sector. The regional dimension of knowledge-based services in Norway, 1970–1985* (2008)

¹¹ Kenessey, Zoltán. "The Primary, Secondary, Tertiary and Quaternary Sectors of the Economy." *Review of Income and Wealth* 33, no. 4 (December 1987): 359–85.

However, to fully capture the interconnected nature of sustained economic growth policies across APEC, a fifth dimension, the quinary sector, must also be considered. This builds on the work of Abler & Adams (1977), covering the sophisticated use of decision-making and associated processes at a policy-level. Although economies in the quinary sector may be classified under other dominant sectors, they are actively engaged in developing innovative approaches to global climate governance and diplomacy, finance, and policy. The following table (Table 3) broadly classifies APEC economies by their dominant economic sectors.

Table 3: Classification of APEC economies by dominant economic sectors

Sector	Definition	APEC Economies
Primary	Economies largely driven by natural resource extraction, such as agriculture, forestry, fishing, or mining.	Chile; Indonesia; Mexico; Papua New Guinea; Peru
Secondary	Economies dominated by manufacturing and industrial production, including heavy industry, construction, and processing.	People's Republic of China; Malaysia; Thailand; Viet Nam
Tertiary	Economies where services such as retail, transport, and tourism constitute the largest share of GDP and employment.	Brunei Darussalam; The Republic of the Philippines
Quaternary	Economies focused on knowledge-based activities such as information and communication technology, research and development, education, and finance.	Australia; Canada; Hong Kong, China; Japan; Republic of Korea; New Zealand; Singapore; United States
Quinary	Economies actively engaged in innovative approaches to global climate governance and diplomacy, and strategic decision-making in climate and sustainability.	Australia; Canada; Japan; New Zealand; The Russian Federation; United States

2.2 Examining the sustained economic growth landscape through thematic growth areas

The landscape of sustained economic growth policies across APEC economies reflects diverse economic priorities, converging around six recurring areas of focus, as identified in Table 1 above.

- (i) Managing extreme weather-related economic disruptions
- (ii) Resource efficiency
- (iii) Energy security
- (iv) Efficient materials management
- (v) Technological innovation
- (vi) Opportunities for all

2.2.1 Managing extreme weather-related economic disruptions

Where mitigating extreme weather-related economic disruptions is concerned, quaternary economies have invested heavily in strengthening domestic capabilities and resilience. Quaternary economies are thus well placed to influence global approaches by demonstrating practical pathways for enhancing resource efficiency and sharing best practices with other economies pursuing similar developmental priorities.

2.2.2 Resource efficiency

Resource-rich economies, typically dominated by primary, secondary and tertiary sectors, tend to incorporate natural capital preservation into their domestic climate frameworks. These include People's Republic of China; Indonesia; Malaysia; and Mexico.

A review of policy documents from these economies reveals a trend of codifying nature protection into law, recognising its importance to socio-economic well-being. Academic research in Malaysia has positioned natural capital as a critical component of inclusive wealth¹², with the protection and conservation of nature as a core element of environmental policy¹³.

¹² [Bhuiyan, Md. Anowar Hossain, Shaharuddin Mohamad Ismail, and Chamhuri Siwar, "Natural Capital as Inclusive Wealth for Malaysia: A Review," *Advances in Environmental Biology* 7, no. 11 \(2013\): 3181–87](#)

¹³ [Malaysia, *National Policy on Biological Diversity 2022–2030*, National Resources and Environment Ministry, 2022.](#)

In Mexico, the MEx30x30 policy laid the foundation to ensure that 30 per cent of territory is conserved by 2030, covering forests, oceans, wetlands, and all ecosystems providing essential environmental services¹⁴.

On the other hand, resource-scarce, quaternary economies such as People's Republic of China; Hong Kong, China; Japan; Republic of Korea; Singapore; and Chinese Taipei tend to focus on innovation, energy security, clean technology and innovative finance.

For high-growth emerging economies such as Indonesia; The Republic of the Philippines; Thailand; and Viet Nam, there is an emphasis on resource efficiency¹⁵ support for small and medium-sized enterprises and job creation¹⁶.

2.2.3 Energy security

Generally, all APEC economies have made plans to bolster energy security, driven by tax incentives and subsidies, laws and regulations, as well as technology-specific roadmaps and frameworks, such as offshore wind or hydrogen strategies. In quantitative surveys, Australia; Indonesia; and Republic of Korea cited energy security as a pathway for cross-border partnerships and collaboration.

For instance, the Government of Indonesia, in partnership with the International Partner Group, launched the *Indonesia Just Energy Transition Partnership (JETP)* in November 2022. The International Partner Group comprises the governments of Canada; Japan; Denmark; European Union; Federal Republic of Germany; Republic of France; Norway; Republic of Italy; United Kingdom of Great Britain and Northern Ireland. The JETP initiative aims to mobilise USD 20 billion in public and private financing to support Indonesia's transition to cleaner energy¹⁷.

2.2.4 Technological innovation

Technological innovation is commonly harnessed as a cross-cutting enabler rather than as a standalone policy focus for sustained economic growth.

¹⁴ [United States Embassy in Mexico, "Mexico Celebrates the Launch of MEX30x30 at COP16," October 30, 2024.](#)

¹⁵ [Asian Development Bank Institute \(ADBI\), *Transforming ASEAN: Strategies for Achieving Inclusive and Sustained economic growth*, ADBI, 2024.](#)

¹⁶ [ERIA/OECD, *SME Policy Index: ASEAN 2024 – Enabling Sustained economic growth and Digitalisation*, Jakarta: ERIA/Paris: OECD, 2024.](#)

¹⁷ [United Nations Development Programme \(UNDP\), "Indonesia Just Energy Transition Partnership \(JETP\)," accessed September 10, 2025.](#)

The APEC Climate Symposium conducted in January 2023 covered how resilience can be achieved using artificial intelligence (AI) applications in extreme weather-related economic disruptions adaptation¹⁸. Recommendations from the Symposium on the use of AI spanned various extreme weather-related fields including climate prediction, disaster risk reduction, agriculture and biodiversity.

2.2.5 Opportunities for all

Labour protection remains underemphasised in most APEC sustained economic growth economies. Several economies however – including Australia; Chile; Indonesia; Mexico; New Zealand; and Thailand – demonstrate strong integration of opportunities for all and labour protection, embedding equality in sustainable development agendas.

These kinds of integration often centre on community-led nature conservation, responsible tourism, and job creation rooted in safeguarding human and natural capital, particularly given their reliance on nature for economic growth.

Economies with high levels of social protection coverage, typically quaternary and quinary economies; may be in a more favourable position to react to global shocks induced by extreme weather-related economic disruptions and evolving socioeconomic trends.

In terms of human capital development, economies such as Chile; People's Republic of China; Republic of Korea; and The Republic of the Philippines, have placed job creation and upskilling at the forefront of their sustained economic growth roadmaps.

Some APEC economies, including Australia; Japan; Mexico; Peru; The Russian Federation; Singapore; and United States, have recently enacted or amended personal data protection laws that safeguard against privacy risks in the age of digitalisation. These efforts align with the APEC Privacy Framework¹⁹ and Cross-Border Privacy Rules System²⁰, which fosters interoperable, trusted data flows across economies with respect to their domestic laws and regulations while encouraging shared best practices in privacy management.

Beyond legal compliance, these frameworks promote capacity building and knowledge sharing, enabling businesses and regulators to develop skills, align standards, and collaborate on privacy governance.

¹⁸ [*APEC, Enhancing APEC Resilience through AI Applications in Weather-related economic disruptions Adaptation*, Policy Partnership on Science, Technology and Innovation \(PPSTI\), January 2023.](#)

¹⁹ [*APEC, Privacy Framework \(2015\)*, Electronic Commerce Steering Group \(ECSG\), August 2017.](#)

²⁰ [*APEC, Cross-Border Privacy Rules System: Policies, Rules and Guidelines*, updated November 2019.](#)

The presence of a strong civil society was evident in Chile; Mexico; and The Republic of the Philippines.

2.2.6 Efficient materials management

Efficient materials management strategies remain a peripheral priority for most APEC economies, although several have begun to raise their ambitions following the launch of the BCG framework.

A few economies (People's Republic of China; and New Zealand) prioritise operational roadmaps or measurable targets aligned with circular principles, which focus on designing out waste, extending the life of materials, and promoting closed-loop systems, compared to other sustained economic growth strategies.

Small urban economies (People's Republic of China; Hong Kong, China; and Singapore) leverage their centralised governance structures to drive coordinated policies across sectors, particularly for efficient materials management and smart city initiatives.

2.3 Key enablers of sustained economic growth policy success

The success of sustained economic growth policies hinges on a combination of interrelated factors –policy coherence, sustained political commitment, stakeholder engagement, institutional capacity and adequate funding. These afford effective, coordinated, and scalable sustained economic growth.

Understanding the different levers for policy success provides a foundation for member economies to identify best practices, replicable approaches, and tailored strategies that can accelerate the implementation of sustained economic growth strategies.

2.3.1 Policy coherence

Economies which demonstrated greater progress in sustained economic growth tend to have complementary policies across economic, social, financial sectors that align toward shared sustained economic growth objectives.

For instance, Chinese Taipei's *Climate Change Response Act (2023)*²¹ establishes a coherent, multipronged, and economy-wide sustained economic growth policy. It legislates a 2050 net-zero target, mandates sectoral emission caps, and introduces a carbon fee system starting in 2024.

The Act integrates regulatory measures, fiscal tools such as the Greenhouse Gas (GHG) Management Fund, and just transition provisions involving local and Indigenous communities. It also institutionalised the Climate Change Administration to coordinate action and mobilise over USD 1.5 billion in green investments. These efforts are already yielding results: in 2022, emissions dropped by 4 per cent from the previous year, counter to global post-pandemic trends, and renewables reached 16.8 per cent of electricity generation by 2024.

2.3.2 Political will and commitment

Consistent leadership and ambition are needed to drive action towards long-term goals.

For example, Papua New Guinea's *Coconut Biodiesel Initiative*²², launched in 2007, demonstrates assertive political leadership at the regional level, with provincial

²¹ [Chinese Taipei, *Weather-related economic disruptions Response Act*, Ministry of Environment, Republic of China \(Chinese Taipei\), amended February 15, 2023.](#)

²² [Harriman, B., "How the Humble Coconut Is Starting to Fuel Parts of Papua New Guinea," *The Guardian*, May 10, 2024.](#)

governments spearheading the local production of coconut oil-based biodiesel to reduce fossil fuel dependence.

First piloted on Karkar Island in 2007, the programme showcases a strategic push for energy sovereignty, rural development, and climate resilience. Authorities have actively promoted policy recommendations for upscaling, integrating local communities into supply chains and reinforcing long-term commitment to green energy alternatives.

2.3.3 Stakeholder engagement and cooperation

Two-way communication proved critical for building public trust, legitimacy, and collective participation in sustained economic growth policies with the relevant stakeholders.

New Zealand's *Offshore Renewable Energy Bill (2024)*²³ illustrates how strong stakeholder engagement can help shape the success of sustained economic growth policies. Through multiple rounds of consultation spanning 2022 to 2023, the Ministry of Business, Innovation and Employment involved the iwi and hapū tribes, industry players, non-governmental organisations, and local councils from regions such as Taranaki, Waikato, and West Coast²⁴.

The Bill legally requires engagement with Māori authorities for permits to develop offshore energy security projects, which is intended to increase transparency and cultural inclusion in sustainability policy. This inclusive process builds social licence, reduces opposition, and increases investor confidence in efficient policy enforcement.

2.3.4 Institutional capacity

Strong institutional capacity encompasses effective design, implementation, enforcement, and updating of sustained economic growth policies.

Indonesia's *GR 30/2024 on Water Resources Management*²⁵, for instance, encompasses proactive updating of licensing and usage frameworks to respond to water scarcity, quality threats, and climate risks by enforcing environmental safeguards and ensuring sustainable access. The regulation replaces outdated permits and integrates comprehensive, ecosystem-based planning in conservation, infrastructure, and usage guidelines from the economy-wide to local level.

²³ [New Zealand Parliament, *Offshore Renewable Energy Bill*, Bill No. 102-2, introduced December 8, 2024.](#)

²⁴ [New Zealand Ministry of Business, Innovation and Employment, *Summary of submissions: Enabling investment in offshore energy security*](#)

²⁵ [Republic of Indonesia, *Peraturan Pemerintah No. 30 Tahun 2024*, Biro Hukum Sekretariat Negara, 2024.](#)

It also centralises water-use approvals within an online single-submission platform, with clear timelines such as seven-day verification windows and mechanisms for permit freezing in cases of overuse or misuse. While quantitative impact data is yet to emerge, the streamlined digital licensing system alone is expected to reduce approval times by 30 to 50 per cent, bolster compliance, and improve governance transparency.

2.3.5 Access to financing

Mobilising the financial resources needed to support innovation, infrastructure, and scale-up efforts has been critical to implementing sustained economic growth strategies.

For example, Chile's *2020 Green Hydrogen Strategy*²⁶ showcases how strong public and global funding can drive sustained economic growth. To realise its bold targets of 5 GW electrolysis by 2025 and the world's lowest-cost hydrogen by 2030, Chile has committed USD 50 million in subsidies to pilot six green hydrogen projects which are expected to leverage over USD 1 billion in private investment²⁷.

The strategy has also attracted major worldwide backing, including EUR 225 million from the European Investment Bank and Germany's KfW Development Bank, USD 150 million from the World Bank, and USD 400 million from the Inter-American Development Bank. As a result, cost forecasts estimate hydrogen production at around USD 1.05 to USD 1.50/kg by 2030, which is among the lowest globally.

²⁶ [Republic of Chile, *National Green Hydrogen Strategy*, Ministry of Energy, November 2020.](#)

²⁷ [International Monetary Fund, *Chile's Bet on Green Hydrogen*](#)

2.4 Barriers to implementation

Challenges faced are unique to each economy and dependent on numerous factors such as access to resources.

On a broad basis, challenges were likely to fall within the following categories: political fragmentation, a lack of financing, technological and infrastructure limitations, economic and social trade-offs, as well as limited opportunities for all.

2.4.1 Lack of funding

Some APEC economies rely heavily on multilateral development banks to co-finance projects, face risk perception challenges, and struggle to align domestic planning with bankable projects. This is particularly so for economies especially affected by extreme weather-related impacts, such as Mexico; Peru; The Republic of the Philippines; and Viet Nam.

Four out of seven economies surveyed listed a lack of financing as among their biggest challenges in achieving sustained economic growth.

As gathered from the survey, Indonesia faces challenges like “high costs, limited access and expertise shortages”. According to the contributor, the economy requires at least IDR 447.1 trillion (USD 27.27 billion) to implement green economy policies in Mid Term Development Plan (RPJMN) 2025–2029, with IDR 360 trillion (USD 22 billion) from non-state budgets.

2.4.2 Technological or infrastructure limitations

APEC economies generally struggle with a lack of consistent data across provinces and geographical areas, which limits effective evidence-based decision-making and the implementation of sustained economic growth targets.

Inadequate institutional infrastructure to scale projects or enforce economy-wide policies and standards were also observed in smaller economies. This resulted in strategies being limited to sector-based or non-government led policies.

Technological and infrastructure limitations was the most common challenge across seven APEC economies surveyed.

For instance, Chinese Taipei's small and medium-sized enterprises account for nearly 98 per cent of the total number of enterprises, and face challenges in terms of funding and technical capabilities that would facilitate their introduce of green technologies to support energy conservation, carbon reduction, and efficient materials management practices.

2.4.3 Economic and social trade-offs

Sustained economic growth policies may introduce higher business costs that weigh on economic growth in the short term. Policy measures such as carbon pricing, emission caps, or green procurement standards can increase operational expenses for firms, particularly in energy-intensive or resource-dependent sectors. The energy transition may also exacerbate existing regional inequalities, particularly where extractive industries are geographically concentrated. This is as green investment flows tend to concentrate in urban or industrial centres, risking an uneven spatial distribution of economic opportunities and infrastructure gains.

Several APEC economies surveyed were challenged by limited land or land acquisition difficulties to advance energy transition-related projects.

Republic of Korea, which relies heavily on fossil fuels, cited limited land, grid constraints, and high development costs as challenges to their transition to cleaner energy. They also observed uneven adoption of low-carbon practices across sectors, highlighting that industries without established low-carbon markets globally face difficulties as cost remains their dominant consideration.

“Some sectors that can find low carbon options are easily adopting to low carbon. But some sectors who do not have low carbon markets globally struggle to adopt a low carbon perspective, since their only perspective is cost, and there is no incentive... Public demand remains relatively low since both producers and consumers prioritise cost and convenience over sustainability.”

Ministry of Trade, Industry and Energy of the Republic of Korea, in a follow-up response to selecting “Lack of public demand / awareness” for the quantitative survey question “Which of the following are the biggest challenges or barriers faced?”

2.4.4 Stakeholder engagement and public opinion

Limited and partial integration of local communities in natural resource governance may undermine policy legitimacy. This results in missed opportunities to draw on traditional ecological knowledge and hinders the pursuit of inclusive and culturally grounded sustained economic growth.

While several APEC economies are beginning to embed local and indigenous communities into natural resource governance through participatory programmes and workshops, few have such principles institutionalised.

“Most large-scale green infrastructure projects face significant social licence challenges from affected communities. This could be due to misinformation disseminated to these communities, a lack of effective engagement from project proponents/developers, and an uncoordinated approach to social licence across

government and the private sector. Social licence issues can delay project and planning approvals, contributing to investor uncertainty.”

Treasury and Department of Foreign Affairs and Trade of Australia, in a follow-up response to selecting “Lack of public demand / awareness” for the quantitative survey question “Which of the following are the biggest challenges or barriers faced?”

Public support has also fluctuated depending on factors including but not limited to perceived conflict with economic growth factors, or in response to specific technologies and solutions.

For instance, public sentiment on nuclear energy remains negative in economies such as Singapore. In Singapore, many continue to perceive nuclear energy as hazardous, shaped by concerns over radioactive waste, proximity risks given land scarcity, and the catastrophic potential of nuclear accidents.

2.4.5 Geopolitical fragmentation

Geopolitical uncertainty, government instability and shifting leadership priorities pose significant obstacles to sustained economic growth progress as environmental agendas are deprioritised amid competing imperatives.

Disruptions caused by global or domestic events was cited as a challenge to the implementation of sustained economic growth policies.

Chapter 3: Sector Spotlights

This chapter takes a closer look at the evolution of sustained economic growth policies across APEC, spotlighting best practices within specific sectors in the following economies: Australia; Canada; Republic of Korea; Peru; and Singapore.

The following case studies were selected to reflect the sector-specific strengths and distinctive policy experiences of the respective economies. They serve to illustrate the varied policy pathways to sustained economic growth through which economies have achieved success. Drawing on quantitative analysis and qualitative insights from key stakeholders, the case studies provide comparative insights into the evolution of policy development and implementation within each sector.

3.1 Australia – Industrial transformation

Australia is strategically leveraging its abundant natural resources to strengthen resilient supply chains and transition toward higher-value sectors in the green economy. This includes a focus on advanced manufacturing, and clean energy supply chains that underpin sustainable industrial growth.

3.1.1 Australia's green policy landscape

Central to maximising the economic and industrial benefits of Australia's transition to net zero is the *Future Made in Australia*²⁸ agenda, a federal industrial plan launched in 2024. The government has committed AUD 22.7 billion to the programme over the next decade, with a focus on five key industries under its new *National Interest Framework*: renewable hydrogen, green metals, low-carbon liquid fuels, critical minerals processing and clean energy manufacturing, including battery and solar panel supply chains. Complementing this industrial push is the development of an Australian Sustainable Finance Taxonomy²⁹. It is designed to strengthen investor confidence in low-emissions investment claims, reduce the risk of greenwashing, and improve comparability of investment products and sustainability disclosures.

Australia has recorded a steady downward trend in annual emissions since the mid-2000s³⁰. This has been accompanied by a steady increase in renewables – now approaching 40 per cent – while coal continues its long-term decline³¹. These trends are laying the foundation for Australia to be a leader in energy security, using its abundant solar and wind resources to meet domestic demand and export clean energy and equipment globally.

²⁸ [Australia, Department of the Treasury. *Future Made in Australia*.](#)

²⁹ [Australian Sustainable Finance Institute. *Australian Sustainable Finance Taxonomy*.](#)

³⁰ [DCCEW, *Annual Weather-related economic disruptions Statement 2023*](#)

³¹ [Clean Energy Council, *Clean Energy Report 2025*](#)

Spotlight: Greening Australia's iron industry

Within this broader context, the steel sector stands out as a core focus of Australia's industrial decarbonisation. Iron and steel production accounts for about 2 per cent of direct emissions nationally³². Marking this shift is the fall in demand for iron made in traditional blast furnaces and towards greener electric arc furnace steelmaking.³³

Currently there is no universal standard or definition for green iron. The Australian Government has committed AUD 1.5 million to establish the International Engagement for Green Metals Standards program that will be led by Standards Australia, working with the International Organization for Standardization (ISO), relevant technical committees and industry to support the development of credible frameworks which would cover green iron. There is an expectation within the sector that green iron could include iron ore that has been processed using lower emission reductants and energy inputs, such as renewable hydrogen in place of coal to make iron metal, a critical input for producing green steel.

Pilot and demonstration projects, such as NeoSmelt and Zesty, and early-stage commercial initiatives in green iron production are undergoing feasibility studies, aiming to commence operations in 2028³⁴. Investment interest is increasing across both upstream supply chains, such as critical minerals, hydrogen production, and energy security infrastructure, as well as downstream applications in steel plants and processing facilities³⁵.

Green metals, including iron and steel, are a central component of the *Future Made in Australia*³⁶. The AUD 1 billion Green Iron Investment Fund will support two streams of funding with AUD 500 million available to support the transformation of the Whyalla Steelworks, while the National Development Stream includes at least AUD 500 million for early mover green iron projects across Australia³⁷.

Challenges in greening iron

³² Australian Energy security Agency (ARENA). *Strategic Priorities: Support the Transition to Low Emissions Metals*. ; DISR,

³³ [Paul Garvey. "China Moving on from Pilbara Iron Ore Unfit for Green Steel: Forrest." *Australian Financial Review*, May 21, 2025.](#)

³⁴ [Reuters. "BHP, Rio Tinto to Build Low-Carbon Iron Pilot Plant in Western Australia." *Reuters*, December 17, 2024.](#)

³⁵ [Australia, Prime Minister. "Albanese Government: Building Australia's Green Iron Future." *Prime Minister of Australia, Media Release*.](#)

³⁶ [DISR industry sector plan](#)

³⁷ <https://business.gov.au/grants-and-programs/green-iron-investment-fund-national-development-stream>

The main challenges hindering green iron development are economical and structural market failures, with green iron being less cost-competitive in comparison to traditional, carbon-intensive iron products.³⁸ There are three key factors contributing to this, identified by The Superpower Institute, a contributor to the report and a leading research body on energy security policy in Australia, in their report “*A Green Iron Plan for Australia*”:

Lack of carbon pricing: Carbon pricing imposes a cost on emissions. Without a carbon price, the “cost gap” or “green premium” between traditional iron and green iron can be up to AUD 1,000 per tonne, depending on the location and technology used, making green iron less financially competitive.

High capital costs and early-mover risks: Green iron production is highly capital-intensive. Early producers face greater project risks, higher borrowing costs, and must overcome the expense of being the first to deploy new technologies at scale. This generates knowledge that benefits later producers without any reward, creating a “positive externality” that disincentivises early investment³⁹.

Infrastructure deficits and coordination problems: The green iron industry requires large-scale, common-user infrastructure, such as electrical lines, hydrogen pipelines and storage, and upgraded ports. Private investors are unlikely to build this infrastructure at the necessary scale because they cannot capture all the spillover effects, leading to under-investment.

“The scale of this transformation is immense... getting the policies right... and setting up the right framework, in where the government should invest its limited resources is critical to achieving success.”

Baethan Mullen, Chief Executive Officer at The Superpower Institute

3.1.2 Enablers for policy implementation

“When I think about any kind of new and emerging industry..., you need a trifecta of policy, technology, and private capital.”

Joanna Kay, Programme Director for International Strategy, Partnerships and Engagement at The Superpower Institute

Australia has taken significant steps to bolster the industrial sector through the *Future Made in Australia* plan. The establishment of the domestic Regional Hydrogen Hubs

³⁸ [The Superpower Institute. *A Green Iron Plan for Australia*. May 2025.](#)

³⁹ *Ibid*, 10.

Programme⁴⁰, clean energy manufacturing initiatives such as the *National Battery Strategy*⁴¹, streamlining of regulatory approvals and financial incentives aimed at reducing early-stage investment risks help to lower production costs and accelerate the deployment of low-emissions technologies. At the same time, Australia is actively mobilising private capital through green finance frameworks such as the draft *Sustainable Finance Strategy*⁴² and investment facilitation mechanisms to attract more global and domestic capital.

There is room for greater synchronisation at a practical level, which requires balancing between the need to correct market failures and enable private investments. But a shift in language in recent years to frame decarbonisation as an economic opportunity has helped policymakers and sustained economic growth advocates secure broader stakeholder buy-in, according to the Superpower Institute⁴³.

Australia's industrial companies have also made progress in engaging local and Indigenous communities, ensuring they are integrated into their supply chains and corporate governance institutions. In 2021, former Western Australia state treasurer Ben Wyatt was the first Indigenous Australian to be appointed to the board of ASX200 firm Rio Tinto⁴⁴. Mining and construction firms are also estimated to spend more on Indigenous businesses procurement than other corporate sectors⁴⁵.

One of Australia's challenges in advancing green industrial transformation is mobilising sufficient capital. Given limited resources, policymakers must ensure that capital is not only being deployed to the right sectors, but that the best frameworks are in place to steer private capital towards greening industry. As noted by The Superpower Institute during the qualitative interview, carbon pricing, encouraging innovation, and infrastructure improvements are the key areas needing policy support.

Although not as significant of a challenge, capacity building is still critical to convince a "large middle" that may not have enough information about the benefits of greening the industrial sector. Addressing this will require collective effort from policymakers, researchers, non-governmental organisations and the press to inform the public.

While policies such as tax incentives and corporate sustainability reporting requirements are crucial, they must be coupled with economic instruments such as carbon taxes to achieve meaningful emissions reductions by creating economic incentives to adopt low-carbon technologies.

⁴⁰ [Building regional hydrogen hubs](#), Department of Weather-related economic disruptions, Energy, the Environment and Water (Australia), last updated November 1, 2024.

⁴¹ [National Battery Strategy](#), Department of Industry, Science and Resources (Australia), May 23, 2024.

⁴² [Sustainable Finance Strategy \(Consultation Paper\)](#), The Treasury, Australia, released November 2, 2023

⁴³ Joanna Kay, Programme Director for International Strategy, Partnerships and Engagement at The Superpower Institute, comment during qualitative survey [August, 2025]

⁴⁴ [ABC News. "Ben Wyatt Becomes First Indigenous Person on Major Company Board." ABC News, September 4, 2021.](#)

⁴⁵ [Supply Nation. Driving Growth in Indigenous Business. December 2020.](#)

3.1.3 Learnings from Australia's industrial transformation strategy

1. Strategic industrial planning

The *Future Made in Australia* policy outlines a pathway for Australia's industrial sector to focus investments on high-potential, green applications, such as manufacturing for clean energy, renewable hydrogen, green metals, and low-carbon fuels. This targeted approach offers a level of administrative certainty for the private and financial sectors to plan capital development and expenditures.

2. Frameworks to facilitate green investment

The introduction of the *Australian Sustainable Finance Taxonomy* boosts investor confidence by standardising what qualifies as low-emissions investments. These complement the financial incentives under *Future Made in Australia*, which include production tax credits and targeted grant funding. Together, such measures create a comprehensive environment of fiscal policies to support industrial transformation.

3.2 Canada – Clean technology development

Canada is prioritising the expansion of its low-GHG emissions energy technologies, including carbon capture, utilisation, and storage (CCUS), nuclear energy, hydrogen, alternative fuels, and other energy transition solutions, to support a decarbonised economy.

3.2.1 Canada's green policy landscape

Decarbonisation of Canada's energy sector serves as a core element in pursuit of its goal to reduce greenhouse gas emissions up to 45 per cent below 2005 levels by 2030, an interim target towards its 2050 net zero commitment.⁴⁶

Carbon pricing serves as a central component of Canada's weather-related economic disruptions plan. Its current carbon pricing model offers provinces and territories the flexibility to adapt pricing systems with adherence to minimum domestic standards, with a federal system as a default⁴⁷. The federal system comprises two main parts: a fuel charge on fossil fuels, paid by distributors according to fuel type, and an *Output-Based Pricing System* for large industrial emitters. Proceeds from the fuel charge are returned to territorial governments, individuals and small- and medium-sized businesses.

In addition, Canada encourages businesses to decarbonise using regulatory frameworks such as the *Clean Electricity Regulations*, which sets performance standards to achieve a net-zero electricity grid by 2035. Canada's *Methane Regulations* aim to reduce emissions of the potent greenhouse gas, while its *Clean Fuel Regulations* encourage the use of low-carbon transportation fuels.

These regulations are complemented by a suite of strategic investment tax credits, which make it more attractive for businesses to invest in clean technologies. Enacted in June 2024, *Canada's Clean Economy Investment Tax Credits (ITCs)*⁴⁸ represent CAD 93 billion in federal incentives by 2034–35 and include the *Clean Technology ITC*, the *Carbon Capture, Utilisation and Storage ITC*, the *Clean Technology Manufacturing ITC*, and the *Clean Hydrogen ITC*.

The *CCUS ITC* is a refundable tax credit for eligible capital expenditures and is anticipated to provide more than CAD 7.5 billion in support by 2030 and includes tax credit rates of 60 per cent for direct air capture, 50 per cent for other capture equipment, and 37.5 per cent for transport, storage and use equipment.

⁴⁶ Government of Canada. *Canada's 2035 Nationally Determined Contribution*. February 2025.

⁴⁷ Government of Canada. *Putting a Price on Carbon Pollution: How It Will Work*. Environment and Weather-related economic disruptions Canada.

⁴⁸ Government of Canada. *Clean Economy Investment Tax Credit*. Canada Revenue Agency.

Meanwhile, the *Clean Hydrogen ITC* provides a 15 to 40 per cent refundable tax credit for investments in projects that produce hydrogen. Projects that produce the cleanest hydrogen receive the highest levels of support.

Spotlight: Supporting CCUS in Canada

CCUS is an important pathway towards Canada's sustained economic growth agenda⁴⁹. CCUS projects have continued to rapidly grow across Canada, particularly in Alberta and Saskatchewan, forming 20% of the world's large-scale CCUS projects such as the Alberta Carbon Trunk Line and Boundary Dam⁵⁰. At the forefront of the clean tech movement, the economy is projected to have a fivefold increase in sequestration by 2030.⁵¹

Policy levers for CCUS adoption

Canada leverages a combination of market-based and non-market-based mechanisms. Financial incentives such as carbon pricing and tax incentives attract capital and accelerate commercialisation, while regulations and knowledge-sharing platforms create an enabling environment. Detailed below is a non-exhaustive list of policy measures Canada has deployed to support CCUS adoption.

Policy	Description
<i>Canada's Carbon Management Strategy</i> ⁵²	Outlines Canada's overall strategy for achieving its climate objectives, identifying five low-carbon pathways for carbon management including CCUS. The strategy also lays out five federal priorities for the sector: • Accelerating innovation and R&D • Advancing policies and regulations • Attracting investment and trade opportunities • Scaling-up projects and infrastructure • Building partnerships and growing inclusive workforces
<i>Strategic Innovation Fund Net Zero Accelerator</i> ⁵³	CAD 8 billion in funding to help companies reduce emissions.
Targeted investment in R&D ⁵⁴	The Canada Infrastructure Bank invests in CCUS infrastructure projects, including through its Project Acceleration funding for front-end engineering and design capital expenditures.

⁴⁹ [Natural Resources Canada. *Canada's Carbon Management Strategy*.](#)

⁵⁰ [Global CCS Institute. *Global Status of CCS Report: Update 23 November*.](#)

⁵¹ [International Energy Agency \(IEA\). *CCUS Projects Explorer*.](#)

⁵² [Natural Resources Canada. *Canada's Carbon Management Strategy*](#)

⁵³ [Government of Canada. *Net Zero Accelerator Initiative*. Innovation, Science and Economic Development Canada.](#)

⁵⁴ [Canada Infrastructure Bank. *Project Acceleration*.](#)

<i>Canada Growth Fund</i> ⁵⁵	CAD 15 billion in investment tools designed to address risk and accelerate private sector investment in CCUS, such as carbon contracts for differences.
<i>Greening Government Strategy</i> ⁵⁶	Commits the federal government to purchasing at least CAD 10 million in carbon removal services between 2024-2030.
Draft protocol for <i>Direct Air Carbon Dioxide Capture and Geological Storage (DACCS)</i> ⁵⁷	A preliminary federal offset protocol that will create an incentive for companies to undertake DACCS projects.
Provincial pore space ownership legislation	Provinces are responsible for regulating CCUS activities over the subsurface resources (including the “pore space” underground where carbon dioxide will be stored) assigned to them. Alberta ⁵⁸ , Saskatchewan ⁵⁹ , and British Columbia ⁶⁰ have regulations that support safe and permanent geological carbon dioxide storage.
Public consultations and engagements ⁶¹	Conducted throughout 2025, public consultations provide key stakeholders such as Indigenous people, provincial and territorial governments, and the public information and the opportunity to share their views on future policies.
Knowledge sharing and best practices	Draft legislation for Carbon Capture, Utilisation and Storage Investment Tax Credit ⁶² requires large CCUS projects with over CAD 250 million in capital expenditure to submit knowledge sharing reports that will be shared with the public to support future CCUS deployment.

3.2.2 Enablers for policy implementation

“Canada is fortunate to have natural advantages – with some regions having abundant geology suitable for carbon dioxide storage. Canada also benefits from a strong foundation of expertise with leadership from industry, researchers and

⁵⁵ [Canada Development Investment Corporation. *Canada Growth Fund Inc.*](#)

⁵⁶ [Government of Canada. “Government of Canada Commits to Purchase Carbon Dioxide Removal Services to Green Government Operations and Achieve Net-Zero Emissions.” Treasury Board Secretariat, October 2024.](#)

⁵⁷ [Government of Canada. *Direct Air Carbon Dioxide Capture and Geological Storage Protocol.* Environment and Weather-related economic disruptions Canada.](#)

⁵⁸ [Alberta. *Mines and Minerals Act*, RSA 2000, c. M-17, s. 15.1\(1\).](#)

⁵⁹ [Saskatchewan. *Mines and Minerals Act*, SS 1984, c. M-17.1, s. 10.1\(1\).](#)

⁶⁰ [British Columbia. *Petroleum and Natural Gas Act*, RSBC 1996, c. 361, s. 130\(1\).](#)

⁶¹ [Natural Resources Canada. *Public Consultations and Engagements.*](#)

⁶² [Natural Resources Canada. *CCUS Investment Tax Credit: Technical Guidance Document.*](#)

governments, and a competitive policy environment and enabling regulatory frameworks.”

Natural Resources Canada

1. Technical expertise

Technical expertise has enabled strategic planning and infrastructure development in Canada's CCUS sector. For instance, Natural Resource Canada's CanmetENERGY⁶³ has been in a leader in CCUS research since the 1990s, advancing the technologies, analytical tools and knowledge to help reduce technological barriers to investment. CanmetENERGY has developed the *Canadian CCUS Assessment Framework* to provide open-source tools for carbon management, which is being optimised to investigate opportunities for hubs.

2. International collaboration

International collaboration accelerated innovation and global capacity. Canada's cross-border engagements on CCUS research expanded through the International Energy Agency Greenhouse Gas Research and Development Programme (IEAGHG) in Saskatchewan, aimed at studying the long-term storage of carbon dioxide⁶⁴. The IEAGHG Weyburn-Midale CO₂ Monitoring and Storage Project captured the attention and funding of governments, research organizations and industry in North America, Japan, the Middle East and Europe.

3. Stakeholder and public engagement

To ensure stakeholder engagement in policy development, Natural Resources Canada spent more than a year to engage a diverse range of groups in the development of *Canada's Carbon Management Strategy*. This includes provincial and territorial governments, Indigenous organisations, industry, technology innovators and adopters, infrastructure stakeholders, academia, environmental non-governmental organisations, the finance community, and other interested parties.

Policy uncertainty has been cited by stakeholders as a significant barrier to CCUS project deployment in Western Canada, with investment decisions negatively impacted by slow policy implementation, delayed decisions on tax credits, as well as inadequate returns projected for investors⁶⁵. There are also risks of project delays or cancellations due to poor engagement with local and Indigenous communities.

The Canadian government has worked across sectors and regions to obtain insights to inform policy decisions. One key approach to getting these insights is through public

⁶³ [Natural Resources Canada. *CanmetENERGY Research Centres*.](#)

⁶⁴ C. Preston, M. Monea, W. Jazrawi, K. Brown, S. Whittaker, D. White, D. Law, R. Chalaturnyk, and B. Rostron, "IEA GHG Weyburn CO₂ Monitoring and Storage Project," *Fuel Processing Technology* 86, no. 14–15 (October 2005): 1547–1568, [doi:10.1016/j.fuproc.2005.01.019](#).

⁶⁵ [Carbon Management Canada. *Barriers to Large-Scale CCUS Project Development in Western Canada: Summary Report*. July 2024.](#)

consultation periods on draft legislations and regulations, where anyone from the public can provide input on the design of new policies. These engagements can shed light on concerns such as competitiveness, environmental protections, carbon accounting, technology readiness, and policy alignment with other jurisdictions.

Meanwhile, Canada's hydrogen policy seeks to address decarbonisation in its hard-to-abate sectors, without which electrification alone would be less economical or technically unfeasible. The first progress report on its *Hydrogen Strategy*⁶⁶, published in May 2024, showed how the government is investing in hydrogen infrastructure, including production plants and fuelling stations, to support the growing demand for hydrogen in Canada's transportation and industrial sectors. The report identified four strategies for its next reporting period (2024-2026), which are to de-risk high-impact production projects of low-carbon hydrogen, achieve scalable hubs and strategic corridors, advance codes and standards development, and grow awareness and enhance market data.

3.2.3 Learnings from Canada's clean development strategy

1. Financial support for new technologies

Canada's government plays a crucial role in de-risking the innovation and adoption of new technologies. Targeted public funding and financial incentives such as contracts for difference support cleantech companies and accelerate commercialisation. The *Sustainable Development Technology Fund*⁶⁷, an arm's-length non-profit foundation created by the Government of Canada, is one such support mechanism that funds new clean technology by acting as a funder of public-private partnerships.

2. Knowledge sharing

An ecosystem of regional and global knowledge-sharing pathways to build technical expertise forms the bedrock of Canada's clean development strategy. Networks such as Regional Trade Commissioners support outreach and access to global markets, while federal agencies including Natural Resources Canada support research and industry collaboration by mobilising R&D and development projects⁶⁸.

3. Stakeholder engagement

"Canada's Carbon Management Strategy builds on more than a year of significant engagement led by Natural Resources Canada with a diverse range of groups,

⁶⁶ [Natural Resources Canada. *Hydrogen Strategy for Canada: Progress Report*.](#)

⁶⁷ [Innovation, Science and Economic Development Canada \(ISED\), *Evaluation of the Sustainable Development Technology Fund* \(February 2025\).](#)

⁶⁸ [Government of Canada, *Clean Growth Program*](#)

including provincial and territorial governments... with the goal of reflecting the various opportunities that carbon management technologies offer across regions and industrial sectors.”

Natural Resources Canada

Canada emphasises a participative approach to policymaking, facilitating continuous improvement of policies and alignment with climate goals. Creating open forums for engagement where the public can shed light on concerns such as competitiveness, environmental protections, carbon accounting, technological readiness, and policy alignment with other jurisdictions is key to informing Canada’s policy decisions.

3.3 Republic of Korea – Digitalisation and technology

As a leading exporter of semiconductors and consumer electronics, the Republic of Korea is enhancing ICT infrastructure, artificial intelligence, and data centre capacity to drive technological innovation and digital transformation.

3.3.1 Republic of Korea's green policy landscape

The Republic of Korea has been an early adopter of sustained economic growth, embracing decarbonisation under the “*Low Carbon, Green Growth*” agenda in 2008, spearheaded by the administration under former president Lee Myung-bak. This set the tone for the economy to emphasise synergies between environmental protection and economic growth, building momentum for integrating social and environmental goals in economic growth-oriented policy.⁶⁹

Though they formed an important foundation for sustainable development, these early efforts were met with limited success because of the high costs of low-carbon technologies and challenges surrounding the Republic of Korea's emissions trading system (K-ETS). For instance, high cost of solar photovoltaic electricity resulted in subsidies amounting to 92 per cent of the total USD 243.1 million allocated for the feed-in tariff system in 2009.⁷⁰ This prompted the government to shift to using a renewable portfolio standard system in 2011, which set obligatory target shares of renewable generation for each power generation company.

In addition, the K-ETS has been plagued by some of the economy's weakest carbon prices over the 2023-2024 period, largely due to an oversupply of allowances over the 2021 to 2025 planning period.⁷¹

However, the Republic of Korea's government has been working on reforms to its green and digital policies. The economy's *Green New Deal and Digital New Deal* are among the most recent key policy frameworks shaping its economic priorities today. They are part of the broader *Korea New Deal* announced in July 2020.⁷²

Under the *Green New Deal*, KRW 73.4 trillion (USD 53.2 billion) is to be invested in strengthening climate action and realising a green economy, with investments focused on green infrastructure and industry as well as energy security. It also promotes innovation in green industries by prioritising technology development support for small and medium-sized enterprises involved in the environmental and energy sectors.

⁶⁹ Seong, J. “The Sustained economic growth Policy of the Lee Myung-bak Government (Policy Integration Perspectives for System Transition).” *Korea Journal*, KoreaScience.kr.

⁷⁰ S. Kang, J. Oh, and H. Kim, *Korea's Low-Carbon Sustained economic growth Strategy*, OECD Development Centre Working Paper No. 310 (Paris: OECD Publishing, 2012).

⁷¹ “Deciphering Oversupply, Asia Pacific Emissions Markets and Policy Perspectives.” *OPIS*.

⁷² “Korean New Deal, Digital New Deal, Green New Deal, and Stronger Safety Net.” *International Energy Agency (IEA)*.

Meanwhile, the *Digital New Deal* is estimated to require KRW 58.2 trillion (USD 42.2 billion) in investments, with the aim of accelerating the Republic of Korea's transition towards a digital economy. It focuses on promoting the integration of data, networks and artificial intelligence (AI) throughout the economy.

Former president Moon Jae-in's declaration in October 2020 that the economy would actively move towards carbon neutrality by 2050 resulted in weather-related economic disruptions policies being revisited to align with the declaration.⁷³ This led to the launch of the *Framework Act on Carbon Neutrality and Green Growth*, which was passed in 2023 and legally commits the government to achieving carbon neutrality by 2050. The administration also established the first *National Basic Plan for Carbon Neutrality and Green Growth* in April 2023.⁷⁴

3.3.2 Enablers for policy implementation

A World Bank study, which investigated the Republic of Korea's experience in greening its information communication technology sector, identified factors for success which included the application of strong and early political commitment, long-term planning and comprehensive policies, investment in research and development, and a governance structure that encompasses a whole-of-government approach.⁷⁵

These factors are reflective of those identified by the Global Green Growth Institute in 2015, highlighting a solid governance framework, enabling legal environment, mobilisation of various ministries, and honouring global agreements.⁷⁶

Increasing energy security capacity has been cited as a priority, in addition to smart grid infrastructure, battery energy storage systems (BESS), as well as tax support for solar and wind power as strategic technologies.

Since the release of the *National Strategy for Artificial Intelligence* in 2019,⁷⁷ the Republic of Korea has expanded support for research and development, workforce development, and public-private partnerships. The Strategy, that lays out the economy's core strategies to transform the Republic of Korea to a world leader in AI, focuses on expanding AI infrastructure and regulation, securing semiconductor competitiveness, and nurturing innovative start-ups.

Spotlight: Data Centres as Critical Infrastructure for the Digital Economy

⁷³ [Weather-related economic disruptions, Technology and Innovation – Views from Korea and Japan - YouTube](#)

⁷⁴ [Announcement of the National Basic Plan for Carbon Neutrality and Sustained economic growth - Kim & Chang](#)

⁷⁵ [Greening Digital in Korea: Korea Case Study for Greening the ICT Sector - Open Knowledge Repository - World Bank Group](#)

⁷⁶ [Global Sustained economic growth Institute. Korea's Sustained economic growth Experience: Process, Outcomes, and Lessons Learned.](#)

⁷⁷ [The Government of the Republic of Korea, National Strategy for Artificial Intelligence](#)

Underpinning this development, the Republic of Korea has prioritised the development of large-scale data centres and cloud infrastructure. The *Digital New Deal* allocates billions of won for expanding data storage and high-performance computing. Private actors are already breaking ground in developing hyperscale projects to support this shift towards a digital economy, a notable example being SK Group's KRW 7 trillion investment to build the economy's largest AI data centre, said to be fully operational with a capacity of 100 megawatts by 2029⁷⁸, and the equivalent to powering a mid-sized city's households.

Greening the grid

With the anticipation for data centre growth leading to a greater demand for electricity, the Republic of Korea outlined its *11th Basic Plan for Long-Term Electricity Supply and Demand* to the following goals⁷⁹:

- Set a more ambitious carbon-free electricity target by 2038;
- Quadruple energy security capacity to 121.9 gigawatts by 2038, compared to 30GW in 2023;
- Phase out coal-fired power plants and scale up nuclear capacity
- Strengthen grid infrastructure, storage and demand management

“Green by design”

On August 29 2025, Bae Kyung-hoon, the Republic of Korea's Science and ICT Minister announced plans to draft a special law that will ensure that data centres are constructed to be environmentally friendly and energy-efficient by design⁸⁰.

3.3.3 Learnings from Republic of Korea's digitalisation strategy

1. Sustained political will and commitment

Since Korean president Lee Myung-bak's 2008 proclamation of *Low Carbon, Green Growth* as a vision for the economy, successive administrations have continued to champion sustained economic growth as an economic priority. This tone from the top has ensured continuity in efforts to align development plans with the sustainability agenda, paving the way for more ambitious targets such as the Republic of Korea's most recent climate targets to be made.

2. Enabling legal environment

The Republic of Korea's *Framework Act on Carbon Neutrality and Green Growth* (2010) laid the groundwork for subsequent acts and policies that encourage sustained economic growth. This includes the *Renewable Portfolio Standard Act* (2012), which

⁷⁸ Reuters, "[South Korea says SK and Amazon to invest \\$5 billion in country's biggest data centre](#)"

⁷⁹ Yonhap News, "[The 11th Basic Electricity Plan, prepared for carbon-free electricity, has been finalised](#)"

⁸⁰ MLex, "[South Korea eyes special law to support AI data-center construction](#)"

set minimum energy security shares for power generators; the *Emissions Trading Scheme Act (2015)*, which established the region's first cap-and-trade scheme; and the *Carbon Neutrality and Green Growth Framework Act (2021)*, that legislated the economy's commitment to carbon neutrality by 2050. These laws have made it possible for Korean citizens to hold the government and companies accountable for climate action through the judicial system.⁸¹

3. Cross-border partnerships

The Green Digital Economy Platform (GDEP) is a partnership between Korea and Indonesia aimed at leveraging the former's technological capabilities and the latter's populous market for research and development into agricultural technology, climate technology and carbon trading⁸². The GDEP, which aims to empower more than 60 million Indonesian farmers, champions a framework that links digital economy with sustainability and carbon reduction efforts.

⁸¹ [South Korean court is Asia's first to rule that government climate action is insufficient | News | Eco-Business | Asia Pacific](#)

⁸² [Green Digital Economy Platform Launched to Empower 62 million Indonesian Farmers with AI and Technology - The Korea Herald](#)

3.4 Peru – Infrastructure development

3.4.1 Peru's green policy landscape

Peru has invested significantly in expanding its public infrastructure over the past few decades, against a backdrop of high economic growth: the economy's gross domestic product has grown at an average of about 4 per cent since the 1990s, more than double its Latin American neighbours.⁸³

The focus of this infrastructure development has evolved from projects backed directly by the government or state-owned enterprises in the first stage, to telecommunications and transportation infrastructure in the second stage. The most recent third stage of infrastructure development supports social well-being, in sectors such as health, education, housing and water treatment plans⁸⁴.

Peru's current infrastructure planning and policies stem from its *National Infrastructure Plan for Competitiveness*, launched in 2019 to fill a USD 118 billion long-term infrastructure gap until 2038⁸⁵. This began with covering the transportation (44 per cent), sanitation (20 per cent), health (16 per cent), and water (7 per cent) sectors.

In line with this, the Ministry of Economy and Finance approved the economy's *National Sustainable Infrastructure Plan for Competitiveness (PNISC)* for 2025-2030 in March 2025⁸⁶. This is the third edition of the plan, following the second edition's launch for the 2022-2025 period.

To oversee the formulation, execution and maintenance of megaprojects and investment programmes, Peru created the *National Infrastructure Authority (ANIN)* in 2023. Meanwhile, public-private partnerships (PPPs), which have largely driven infrastructure development in the economy, are governed by the Agency for the Promotion of Private Investment (ProInversión).

3.4.2 Enablers for policy implementation

Peru's PPP model has been underpinned by favourable policies designed to attract foreign investment, including tax concessions, long-term contract stability, and regulatory frameworks which encourage foreign private capital.

Insights from experts⁸⁷ point to two factors for successful policy implementation. The first is the economy's long-term macroeconomic stability, which is evident from its relatively high economic growth rate, low inflation and prudent fiscal management that has reassured private investors and fiscal stakeholders⁸⁸.

The second key success factor for Peru's infrastructure development is the shift in the majority ownership of infrastructure projects, which has resulted in an improvement in quality of infrastructure for facilities such as airports and highways. Research shows

⁸³ [International Monetary Fund \(IMF\), *Peru: Macroeconomic Developments and Policy Challenges*, in *IMF Country Report* \(Washington, DC: IMF, 2023\).](#)

that the advantage of using PPPs to improve Peru's road infrastructure includes leveraging private sector expertise, budgeting certainty and risk sharing, given favourable legal frameworks to support such project mechanisms.⁸⁹

For instance, roughly 80 per cent of the Pan American Highway is owned and managed by private operators, which have applied global standards in the construction and operation of the highways.

Peru's application of the PPPs has been uneven over the past two decades. The legal framework for PPPs was established in 2008 via the legislative decree No. 1012, which established processes and criteria for selected PPP projects⁹⁰ and facilitated the number and value of PPP projects for nearly 10 years.

However, later revisions to the legal framework resulted in changes that inhibited the expansion of the PPP mechanism. World Bank research found that the changes made to Peru's legal and institutional PPP framework made in 2015 resulted in a more complex process without strengthening systemic capacities. As a result, the PPP system prior to 2020 suffered from reduced trust⁹¹.

The introduced requirement for multiple public offices to review the same financial and technical models for PPPs resulted in projects taking much longer to be reviewed and approved, doubling project timelines.

This limiting environment was compounded by high-profile investigations in 2015 that uncovered irregularities in the awarding of PPPs.⁹² In response, the government enacted additional regulations aimed at reforming its public procurement framework.

⁸⁴ [Ministry of Economy and Finance \(MEF\), *National Infrastructure Plan for Competitiveness 2022–2025* \(Lima: MEF, 2022\)](#)

⁸⁵ [U.S. Department of Commerce, *Peru: Infrastructure Development*, Country Commercial Guide.](#)

⁸⁶ [Ministry of Economy and Finance \(MEF\), "MEF Coordinates National Infrastructure Plan 2025–2030 with Investments that Have a Territorial Focus and Long-Term Vision."](#)

⁸⁷ Dr. Camilo Carrillo, Associate Partner at Ernst & Young Peru; [Ernst & Young \(EY\), *Guide to Investing in Infrastructure Projects in Peru 2024-2025* \(Lima: EY Peru, 2024\).](#)

⁸⁸ [ProInversión, *Legal Stability Agreement*](#). Legal Stability Agreements are investment instruments implemented to stabilise guarantees for investors or companies receiving them.

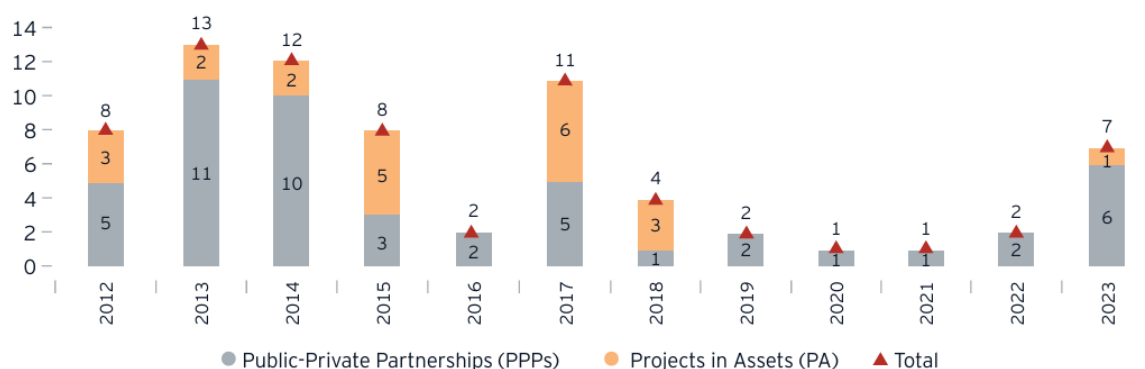
⁸⁹ [Driving Peru's Road Infrastructure: An Analysis of Public–Private Partnerships, Challenges, and Critical Success Factors](#)

⁹⁰ [Public-Private Infrastructure Advisory Facility \(PPIAF\), *Infrastructure Policy and Investment Frameworks: Peru* \(World Bank, 2020\).](#)

⁹¹ [World Bank, *Policy Note on Attracting Private Investment to Infrastructure in Peru: Achievements, Challenges, and a Way Forward* \(Washington, DC: World Bank, 2020\).](#)

⁹² [NYU Journal of Law & Public Policy, "Operation Car Wash and Its Impact in Peru."](#)

Number of Awarded Projects, 2012-2023



Source: Private Investment Promotion Agency (ProInversión).

However, Peru has since witnessed a recovery in the number of PPPs awarded, driven by the normalisation of the oversight processes, harmonisation between government agencies and streamlining of official comments, as well as greater emphasis being placed on private sector capabilities. In the first half of 2024, ProInversión awarded six PPP projects worth USD 5.1 billion focused on ports, road infrastructure, electricity, and phosphate fertilisers. This is the highest level of investment in the last 10 years and double the USD 2.3 billion recorded for the whole of 2023⁹³.

Another incentive Peru is offering to boost private investments is the *Works for Taxes*, which includes provisions for tax credits that allow third-party investors to recover capital investments made in public infrastructure.

Given Peru's ongoing promotion and prioritisation of the *PNISC*, the outlook for infrastructure development in Peru is bright, signalling clear investment and project opportunities through which the private sector can collaborate with the state to advance economic growth.

3.4.3 Learnings from Peru's infrastructure development strategy

1. Streamlined processes

*Legislative Decree No. 1569*⁹⁴ introduces a set of measures to streamline the process for obtaining licenses, permits and authorisations for projects prioritised in *PNISC*, including transport, communications, water and sanitation, electricity, hydrocarbons, environment, agriculture and irrigation, education, and health and production. These reforms accelerate coordination and approval processes while ensuring that the

⁹³ProInversión, "ProInversión Awarded Six Projects for More Than US\$ 5 Billion in the First Half of 2024 [amount]," Invest in Peru.

⁹⁴ProInversión, *Measures Are Decreed to Promote the Execution of 72 Investment Projects: Sectors and Committed Investments*.

projects align with economy-wide and regional investment priorities, creating a more stable and investor-friendly environment for foreign private capital investment.

2. Enhanced governance and transparency measures

Peru has introduced reforms such as the Legislative Decree No. 1444 in 2018 ⁹⁵aimed at enhancing its public procurement framework to improve efficiency, transparency, and accountability, fostering a more credible and trustworthy investment environment.

⁹⁵ [2024 Investment Climate Statements: Peru, U.S. Department of State, 2024.](#)

3.5 Singapore – Sustainable finance

Singapore is positioning itself as a regional green finance hub through strong government support and a strategic framework. Key initiatives include the development of green bonds, grant schemes, and transition finance mechanisms to mobilise capital for sustainable projects.

3.5.1 Singapore's green policy landscape

The Monetary Authority of Singapore (MAS) is the economy's financial regulator and has advanced sustainable finance by integrating environmental risks into its supervisory framework and processes at both firm and system wide levels.

Among the relevant policies issued by the regulator are the *Guidelines on Environmental Risk Management (ENRM)* for banks, insurers, and asset managers, which outline MAS' supervisory expectations around effective governance, robust risk management, and meaningful disclosure of environmental-related risks⁹⁶.

MAS also seeks to equip the financial industry, businesses and individuals with sustainable finance capabilities to support regional demand. For instance, it collaborated with the Institute of Banking and Finance to launch the *Jobs Transformation Map (JTM) for Sustainable Finance*⁹⁷ in April 2024. The map outlines key initiatives to develop a robust sustainable finance talent pool in Singapore, such as expanding the range of sustainable finance courses available for industry professionals to shore up on the new skills and competencies identified through the mapping⁹⁸. MAS also committed SGD 35 million in the Financial Sector Development Fund to support upskilling and reskilling of finance professionals⁹⁹.

Since the launch of JTM, over 4,100 professionals from more than 100 financial institutions have undergone training through courses accredited or recognised by the Institute of Banking and Finance Singapore (IBF). IBF has also issued more than 8,200 Skills Badges – a mark of industry skills mastery to individuals who have completed accredited sustainable finance courses.

On the global front, MAS has actively contributed to global sustainable finance development through its participation in international committees and platforms on climate-related risks. For instance, it chairs the International Association of Insurance Supervisors' Climate Risk Steering Group and the Transition Planning workstream of the Basel Committee on Banking Supervision's Task Force on Climate-related Financial Risks.

⁹⁶ [Monetary Authority of Singapore \(MAS\). *Information Papers on Environmental Risk Management*.](#)

⁹⁷ [Institute of Banking and Finance \(IBF\). *Sustainable Finance Jobs Transformation Map*.](#)

⁹⁸ [Monetary Authority of Singapore \(MAS\), *Sustainable Finance Jobs Transformation Map: Initiatives to Support Upskilling and Reskilling*](#)

⁹⁹ [Monetary Authority of Singapore \(MAS\), *MAS sets aside \\$35 million to Support Upskilling Singapore's Financial Services Sector Workforce in Sustainable Finance*](#)

MAS is also one of the founding members of the Network for Greening the Financial System, which it chaired in 2022-2023. In ASEAN region, MAS chairs the Working Group on Disclosure Standards under the ASEAN Capital Markets Forum and co-chairs the ASEAN Working Committee on Capital Market Development. MAS is also a member of the ASEAN Taxonomy Board, ASEAN Insurance Regulators' Meeting and ASEAN Senior Level Committee on Financial Integration.

Spotlight: Singapore-Asia Green Finance Taxonomy

The *Singapore Asia Taxonomy (SAT)*¹⁰⁰ was launched in December 2023 after three years of extensive consultations. The SAT provides sector-by-sector classifications and enables financial institutions to credibly identify, disclose, and accelerate capital towards green activities. It is the world's first taxonomy to comprehensively define transition activities across eight sectors.

Since its launch, SAT has been used by banks and corporates to align sustainable finance frameworks and develop financial products. In July 2025, the Singapore Sustainable Finance Association issued guidance to support practical application of SAT thresholds¹⁰¹, addressing challenges like limited data availability.

At the 29th Conference of Parties (COP29), MAS also announced plans for interoperability between the SAT and the *Multi-Jurisdiction Common Ground Taxonomy (M-CGT)*¹⁰², a joint initiative by the People's Bank of China, the European Union Directorate-General for Financial Stability, Financial Services and Capital Markets Union, and MAS to align on the definitions of green activities.¹⁰³

3.5.2 Enablers for policy implementation

Worldwide collaboration has been a prominent feature of Singapore's green finance initiatives, as evident in MAS' convening of 30 financial and expert organisations for the Transitions Credits Coalition¹⁰⁴. The coalition is developing transition credits as a new asset class to fund early coal plant retirements and clean energy replacements in Asia, with workstreams focusing on integrity, scalability, and market demand. Interim findings¹⁰⁵ outline key elements for high-integrity credits, risks and mitigation strategies for scaling transactions, and buyer priorities to boost demand.

¹⁰⁰ [Monetary Authority of Singapore \(MAS\). *Singapore-Asia Taxonomy for Sustainable Finance \(Updated Edition\)*.](#)

¹⁰¹ [Singapore Sustainable Finance Association \(SSFA\). *SSFA SAT Practical Guidance*. July 2025.](#)

¹⁰² The M-CGT builds on the EU-China-CGT, which covers eligible green activities across China and the EU with interoperable metrics, highlighting commonalities between jurisdictions.

¹⁰³ [Monetary Authority of Singapore \(MAS\). *Multi-Jurisdiction Common Ground Taxonomy*](#)

¹⁰⁴ [Monetary Authority of Singapore \(MAS\). *Transition Credits*.](#)

¹⁰⁵ [Monetary Authority of Singapore \(MAS\). *TRACtion: Interim Report*.](#)

In addition, capital for the region's transition is being mobilised through Singapore's *Financing Asia's Transition Partnership (FAST-P)*, a blended finance initiative aiming to mobilise up to USD 5 billion for green and transition projects in Asia by de-risking investments and attracting private capital. As of September 2025, the *Green Investment Partnership* under FAST-P has achieved its first close with USD 510 million of capital committed by global and regional private, public and philanthropic institutions¹⁰⁶.

There are still significant opportunities for growth in Singapore's sustainable finance ecosystem, given that over SGD 1.1 trillion is needed to finance Southeast Asia's energy transition over the coming decade. Asia's electricity demand is also projected to double by 2040¹⁰⁷ – fuelled by economic growth, urbanisation, and the electrification of transport and industrial processes.

Over the longer term, initiatives such as the *ASEAN Power Grid* – which aims to interconnect domestic power grids in Southeast Asia – will also create new sustainable finance demand.

Decarbonisation imperatives are also expected to drive an increase in the size of carbon markets over the medium- to long-term. From a geological standpoint, Southeast Asia offers strong natural and technological carbon sequestration potential, and there is strong interest from governments to spur the development of carbon markets.

Singapore is currently pursuing the cross-border development of carbon trading mechanisms under Article 6 of the Paris. It has signed memorandums of understanding with 15 economies globally, and implementation agreements with nine economies, many of which are fellow APEC economies.¹⁰⁸

3.5.3 Learnings from Singapore's sustainable finance strategy

1. Comprehensive guidelines and frameworks

Singapore builds its strong sustainable finance leadership and strategy upon a solid foundation of comprehensive frameworks for sustainable financing that align closely with global standards from the ICMA, ASEAN, and major market bodies. Structured rules for issuance, project eligibility, evaluation, management of proceeds, and transparent reporting provide transparency, certainty, and credibility for engaging with sustainable finance.

¹⁰⁶ [Green Investments Partnership, a Blended Finance Fund under Singapore's FAST-P initiative, Achieves First Close with US\\$510 Million in Committed Capital](#)

¹⁰⁷ Based on Ember's 2024 data analysis on the levelized cost of electricity (LCOE) metric which refers to the average cost to produce electricity over the project life cycle, including the cost to build and operate.

¹⁰⁸ [Government of Singapore. Carbon Markets Cooperation: Introduction.](#)

2. Forward-looking approach to scaling innovative financing mechanisms

Singapore is taking up leadership in key initiatives that seek to develop innovative financing models. MAS' TRACTION coalition is spearheading the adoption of transition credits to support early retirement of coal-fired power plants in Southeast Asia, addressing a critical gap in the region's decarbonisation pathways. Singapore is also establishing itself as a regional carbon trading hub, supported by multiple Implementation Agreements for Internationally Transferred Mitigation Outcomes under Article 6 of the Paris Agreement¹⁰⁹.

3. Capacity-building and skills mapping

The Sustainable Finance Jobs Transformation Map jointly developed by MAS, IBF and WSG identifies emerging skills and job roles needed to meet the growing sustainable finance market. Training programmes for building sustainable finance competencies¹¹⁰ and career conversion programmes for mid-career transitions into sustainable finance¹¹¹ roles are complemented by a wide range of executive courses and university programmes¹¹², creating a comprehensive talent pipeline.

¹⁰⁹ [*The Straits Times*, "Chile Inks Carbon Trading Pact with Singapore, Fifth Country to Do So," April 9, 2025.](#)

¹¹⁰ [*Institute of Banking and Finance Singapore \(IBF\), Sustainable Finance Technical Skills and Competencies*](#)

¹¹¹ [*Workforce Singapore \(WSG\), Career Conversion Programmes \(CCPs\) for Individuals*](#)

¹¹² [*Nanyang Technological University \(NTU\) Singapore, Executive Certificate in Corporate and Environmental Sustainability*](#)

Recommendations and Future Outlook

Key finding 1: Mobilising finance for the economy

Recommendation 1: APEC economies may consider the development of transparent and coherent innovative finance frameworks, underpinned by clear standards, reporting requirements, and long-term policy to attract domestic and foreign capital.

Effective mobilisation of capital advances sustained economic growth. The case studies have demonstrated how clear rules and robust governance frameworks are necessary to attract private investment, fostering a stable and investor-friendly environment.

Recommendation 2: APEC economies may choose to explore and adopt innovative financial instruments and market mechanisms tailored to their domestic contexts, including emerging technologies and energy sources.

Forward-looking innovation in financing instruments and market mechanisms can divert capital to transition projects and accelerate economic growth.

Recommendation 3: APEC economies may wish to explore derisking mechanisms to correct market failures of all sectors such as subsidies, tax incentives, and blended finance models.

Reducing investment risk through targeted public interventions is essential to stimulate private sector participation in high-risk sectors and ensure that these sectors remain competitive with traditional sectors.

Recommendation 4: APEC economies could expand regional and global partnerships, facilitate harmonised standards, and knowledge transfers.

Multilateral cooperation can broaden access to finance, share risks, and mobilise larger pools of capital for sustained economic growth initiatives.

Key finding 2: Policy alignment, coherence, and certainty

Recommendation 5: APEC economies may find value in aligning strategy across a broad range of stakeholders to guide policy design, monitor progress, and share lessons learned.

Active participation of a broad range of stakeholders including government agencies, private sector actors, civil society, academia, and Indigenous communities, as appropriate, ensure that policies implemented are cohesive and practical.

Recommendation 6: APEC economies may consider creating sustained economic growth frameworks that provide overarching guidance while allowing sector-specific flexibility, ensuring that policies are mutually reinforcing.

Overarching growth strategies and sectoral roadmaps give long-term direction to private sector actors, defining the economy's priorities and setting crucial decarbonisation targets to guide business planning and investment.

Recommendation 7: APEC economies may choose to align extreme weather-related resilience measures with industrial policy

Framing extreme weather-related resilience as a lever for competitiveness, new market opportunity, technological leadership, and economic resilience, as the case studies have demonstrated, can create greater economic alignment. Economies can target strategic sectors with high emissions such as raw material exports and advanced manufacturing as well as using policy tools like subsidies and other regulatory measures to shape market development.

Key finding 3: Knowledge-sharing and capacity-building

Recommendation 8: APEC economies may consider strengthening the talent pipeline.

Investing in technical training, collaborating with academia and industry experts can ensure that curricula and professional development are aligned with emerging sector needs and evolving technologies.

Recommendation 9: APEC economies can explore supporting research and development and innovation for emerging technologies.

Providing incentives for innovation and correcting positive externalities can help to encourage the development of new technologies. Knowledge-sharing platforms are also crucial to facilitate collaboration and disseminate lessons learned from the early stages of development.

Recommendation 10: APEC economies may wish to develop sectoral guidance and toolkits to map skills gaps and guide target actions across industries.

Sectoral guidance and mapping provide practical frameworks for capacity-building, whether it is training new talent or re-training existing talent to ensure that the workforce is equipped with the skills to support sustained economic growth.

Conclusion

The APEC region sits at a pivotal juncture: its economic dynamism presents vast opportunities for advancing growth, yet this must be pursued in a manner that safeguards natural resources and builds resilience against environmental risks.

The study reveals that significant barriers remain, primarily funding shortfalls and technological and infrastructure gaps. These constraints can limit the scale and speed of sustained economic growth initiatives, with developing members often facing greater challenges in mobilising finance, accessing advanced technologies, and strengthening resilient infrastructure.

Drawing insights from the five case studies, economies should prioritise closing financing gaps, investing in technological capacity and resilient infrastructure – particularly in energy, transport, and the industrial sectors – to allow a smooth transition to innovative solutions. Policy frameworks should be designed for adaptability: setting clear long-term targets across the economy while allowing sector-specific flexibility to respond to local conditions. Lastly, strengthening human capital through technical training, knowledge-sharing, and sectoral toolkits will ensure that the workforce can implement and scale innovative solutions.

Appendix

The following table provides a reference of stakeholders, ministries, and agencies consulted. We sincerely thank all individuals and organisations who contributed their time and expertise to this study. Their insights have been invaluable in shaping the analysis and recommendations presented.

<i>No.</i>	<i>Contributor</i>	<i>Economy</i>	<i>Type of engagement</i>
1	Baethan Mullen, Chief Executive Officer, The Superpower Institute	Australia	Qualitative survey
2	Joanna Kay, Program Director, International Strategy, Partnership and Engagement, The Superpower Institute	Australia	Qualitative survey
3	Treasury and Department of Foreign Affairs and Trade of Australia	Australia	Quantitative survey
4	Global Affairs Canada	Canada	Quantitative survey
5	Natural Resources Canada	Canada	Qualitative survey
6	Coordinating Ministry for Economic Affairs	Indonesia	Quantitative survey
7	Ministry of Trade, Industry and Energy	Republic of Korea	Quantitative survey
8	This contributor wishes to remain anonymous	Republic of Korea	Qualitative survey
9	Papua New Guinea APEC Study Centre, National Research Institute	Papua New Guinea	Quantitative survey
10	Camilo Carrillo, Associate Partner, EY	Peru	Qualitative survey
11	Ministry of Economy and Finance	Peru	Quantitative survey
12	Ministry of Economic Development of the Russian Federation	The Russian Federation	Quantitative survey
13	Ministry of Trade and Industry	Singapore	Quantitative survey
14	Monetary Authority of Singapore	Singapore	Qualitative survey
15	Department of Overall Planning, National Development Council	Chinese Taipei	Quantitative survey