

A guide for policymakers



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ACCELERATING IMPLEMENTATION OF THE PARIS AGREEMENT IN THE ASIA-PACIFIC REGION

A guide for policymakers

United Nations publication
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ST/ESCAP/285 I
December 2020, Bangkok, Thailand

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The development of the guide was made possible through the ESCAP regional project on Supporting countries in Asia-Pacific to meet commitments to the Paris Agreement, funded by the Russian Federation.

Abbreviations

| | | | |
|-------|--|--------|--|
| ADB | Asian Development Bank | MDB | Multilateral Development Bank |
| APDRN | Asia-Pacific Disaster Resilience Network | NAPs | National Adaptation Plans |
| CIF | Climate Investment Funds | NDCs | Nationally Determined Contributions |
| COP | Conference of the Parties | NGO | non-governmental organization |
| CPEIR | Climate Public Expenditures and Institutional Review | REDD+ | Reducing Emissions from Deforestation and Forest Degradation in Developing Countries |
| ESCAP | United Nations Economic and Social Commission for Asia and the Pacific | REEEP | Renewable Energy and Energy Efficiency Partnership |
| GCF | Green Climate Fund | SDG | Sustainable Development Goals |
| GEF | Global Environment Facility | SEI | Stockholm Environment Institute |
| GHG | greenhouse gas | SIDS | Small Island Developing States |
| IPCC | Intergovernmental Panel on Climate Change | SMEs | small and medium-sized enterprises |
| IRENA | International Renewable Energy Agency | UNDP | United Nations Development Programme |
| IUCN | International Union for Conservation of Nature | UNEP | United Nations Environment Programme |
| LDCs | Least Developed Countries | UNFCCC | United Nations Framework Convention on Climate Change |

| | |
|--|----|
| Climate Ambition Under the Paris Agreement | 1 |
| Overview of the Guide to Accelerating Climate Action in ESCAP Member States | 9 |
| Area 1: Energy Transition | 12 |
| <i>What energy transition means for implementing the Paris Agreement</i> | 13 |
| <i>How to accelerate energy transition for Paris Agreement implementation</i> | 16 |
| Area 2: Climate Finance and Carbon Pricing | 22 |
| <i>What climate finance and carbon pricing mean for implementing the Paris Agreement</i> | 23 |
| <i>How to accelerate climate finance for and carbon pricing for Paris Agreement implementation</i> | 26 |
| Area 3: Industry Transition | 32 |
| <i>What industry transition means for implementing the Paris Agreement</i> | 33 |
| <i>How to accelerate industry transition for Paris Agreement implementation</i> | 37 |

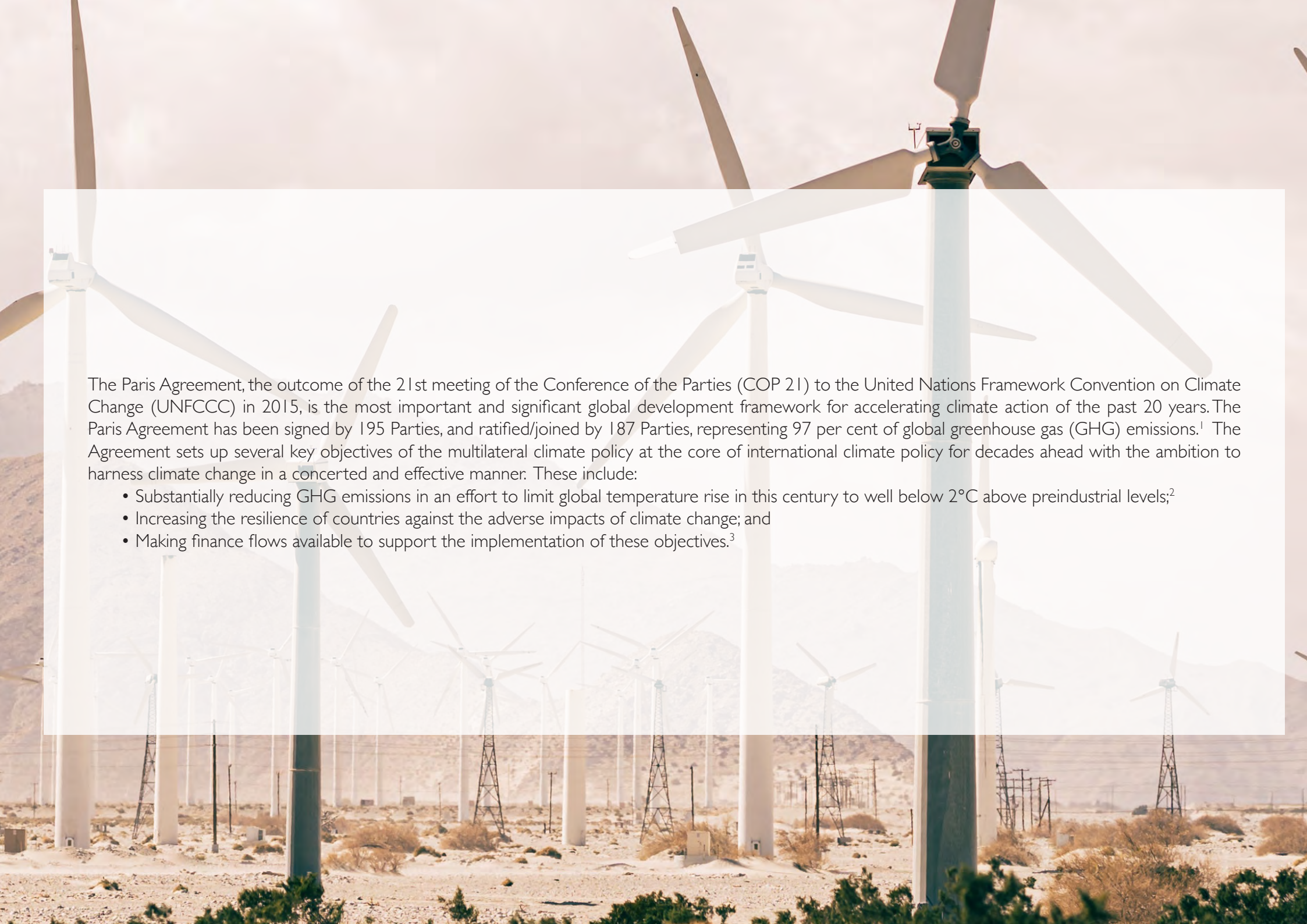
Table of Contents

| | |
|---|-----|
| Area 4: Nature-based Solutions | 44 |
| <i>What nature-based solutions mean for implementing the Paris Agreement</i> | 45 |
| <i>How to accelerate nature-based solutions for Paris Agreement implementation</i> | 51 |
| Area 5: Cities and Local Action | 56 |
| <i>What cities and local action mean for implementing the Paris Agreement</i> | 57 |
| <i>How to accelerate cities and local action for Paris Agreement implementation</i> | 61 |
| Area 6: Resilience and Adaptation | 68 |
| <i>What resilience and adaptation mean for implementing the Paris Agreement</i> | 69 |
| <i>How to accelerate resilience and adaptation for Paris Agreement implementation</i> | 72 |
| Endnotes | 78 |
| References | 81 |
| Annex 1: Overview of initiatives to accelerate Paris Agreement implementation | 87 |
| Annex 2: Gaps and opportunities analysis checklist | 123 |



A photograph of a large wind farm in a desert landscape. In the foreground, several wind turbines are visible, with their white towers and three-bladed rotors. The background shows a range of dry, hilly mountains under a clear sky. A red rectangular overlay is positioned in the upper left, containing the title text. Another red rectangular overlay is positioned horizontally across the middle of the image.

Climate Ambition Under the Paris Agreement



The Paris Agreement, the outcome of the 21st meeting of the Conference of the Parties (COP 21) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2015, is the most important and significant global development framework for accelerating climate action of the past 20 years. The Paris Agreement has been signed by 195 Parties, and ratified/joined by 187 Parties, representing 97 per cent of global greenhouse gas (GHG) emissions.¹ The Agreement sets up several key objectives of the multilateral climate policy at the core of international climate policy for decades ahead with the ambition to harness climate change in a concerted and effective manner. These include:

- Substantially reducing GHG emissions in an effort to limit global temperature rise in this century to well below 2°C above preindustrial levels;²
- Increasing the resilience of countries against the adverse impacts of climate change; and
- Making finance flows available to support the implementation of these objectives.³

The Paris Agreement and its ambition raising mechanism

The Paris Agreement was developed with a high degree of flexibility through its approach of nationally determined contributions (NDCs), paired with a so-called ambition raising mechanism⁴ to respond to historical challenges concerning compliance with multilateral climate policy agreements. The NDCs provide countries with the opportunity to define national climate targets and actions in the areas of mitigation (e.g., increasing the share of renewable energies in the local energy mix), adaptation and others, accompanied by suggested measures and local processes for defining, implementing and evaluating these actions. The initial round of NDCs has been submitted over the course of 2016, and the first updates are due in 2020.⁵ It is foreseen that countries will communicate updated NDCs every five years, and it is expected that each successive national commitment will represent a progression beyond the current NDC in terms of its ambition.⁶

As a key element of the ambition raising mechanism, a “Global Stocktake” process to evaluate collective progress towards overall objectives of the Paris Agreement will commence in 2023 and will inform the next round of NDC reviews.⁷ This flexible approach allows Parties to design their climate actions according to their national circumstances, but provides them with a defined process of re-evaluating existing actions without the need for a new international agreement. This continuous update process also allows countries to involve multiple stakeholder groups in defining new actions (e.g., through local consultation processes), inspiring innovation on local climate action and increasing ownership among its citizens to pursue the nationally set goals.⁸ This process was developed to support an accelerated implementation of the Paris Agreement over time.



The need for a more ambitious, accelerated climate action



The existing NDCs take a first step in the direction of the fundamental objectives of the Paris Agreement. However, assessments of their ambition outline that current measures are not sufficient to achieve the envisaged objective of reducing GHG emissions. A report by the UNFCCC Secretariat finds that aggregate emission reductions communicated in the initial round of NDCs do not fall within the range of least-cost 2°C scenarios defined by the Intergovernmental Panel on Climate Change (IPCC).⁹ The latest Emissions Gap Report of the United Nations Environment Programme (UNEP) emphasizes that the current mitigation ambition is not sufficient: “In 2030, annual emissions need to be 15 gigatons CO₂e lower than current unconditional NDCs imply for the 2°C goal, and 32 gigatons CO₂e lower for the 1.5°C goal.”¹⁰

A recent partnership report by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the United Nations Development Programme (UNDP) and the Asian Development Bank (ADB) on Sustainable Development Goals (SDG) implementation in the region also underscores that countries lag behind on climate action (SDG 13). Every Asia-Pacific subregion part from North and Central Asia and the Pacific needs to actively address existing GHG emission trends.¹¹ The report underlines that Asia-Pacific needs to scale up ambition and improve planning for NDC implementation. Whether the level of ambition in the NDCs is sufficient or not will be revealed through the “Global Stocktake” process in 2023. However, in autumn 2020, many Parties had already shown ownership for the flexible approach, announcing new and ambitious climate actions to accelerate the implementation of the Paris Agreement.¹² Nonetheless, further efforts will be required to sufficiently speed up the process - particularly from the largest economies and GHG emitters.

COVID-19: The impact of the COVID-19 crisis on accelerating climate action

During the COVID-19 pandemic, discussions around its impact on ongoing climate action gained momentum, driven by the stakeholders of the international climate change community. While putting the global economy on hold has led to short-term reductions of carbon dioxide emissions, the underlying structural causes were not addressed, and managing the crisis has raised other priorities, such as the health care system, social services or stabilizing the economy, on the agenda of any government.¹ With regards to the impacts for the Asia-Pacific region, the ESCAP published a report underlining that the necessary quarantines, travel restrictions and lockdown of cities had varying negative effects on local economies, with particular impacts in service sectors such as tourism, retail, hospitality and civil aviation, as well as in the export of commodities.² Nevertheless, cumulative GHG emissions in Asia and the Pacific have risen to just below 35 gigatons CO₂ by the end of the year and are almost equal to the regional record of 36.7 gigatons CO₂ in 2019.³ Another setback for international climate politics was the announcement that COP 26, where last implementation provisions of the Paris Agreement were about to be decided, has been postponed to 2021.⁴

A moment to progressively reflect upon the future of climate policy in times of COVID-19 was the 11th Petersberg Climate Dialogue in Berlin, 27 to 28 April 2020. During the summit, United Nations Secretary-General António Guterres underscored the ongoing need for increased ambition of NDCs, stating that climate change is a comparable global shock with the need for a strong concerted response.⁵ The 30 ministers present at the summit concluded that stimulus plans for the recovery of local economies shall be green, directing investments towards solutions like renewable energy, green mobility and climate-friendly industrial processes.⁶

However, the reality of doing so has proven more complex for the majority of countries in the world. For instance, ESCAP analysis reveals that to counter the negative impacts of COVID-19, Asia-Pacific governments in 2020 set aside an estimated 7 per cent of gross domestic product on average, for measures including those that target the poorest populations, especially in job creation as well as some green actions.⁷ The analysis further revealed that in 2020, governments in the region introduced a total of 111 measures in line with a green recovery. Some 56 per cent of the measures were entirely unplanned – demonstrating the degree of innovation that is possible in the region. Beyond this, ESCAP identified in existing NDCs a further 93 measures that countries in the region have committed to take that could be in line with a green recovery but that are not yet being implemented. Furthermore, seven countries in the region submitted updated NDCs in 2020, and eight countries in the region have now announced carbon neutrality targets, including Bhutan, Fiji, Japan, Marshall Islands, New Zealand, Republic of Korea and Singapore by 2050 and China by 2060 or earlier.⁸ Yet there are still few “role model” examples in Asian and the Pacific that are implementing an economy-wide “build-forward” policy, and there are major gaps in the energy, transport and tourism and land-use sectors.

Thus, the analysis by ESCAP calls upon actors in the region to uphold commitment to sustainability and provides ideas for how to align COVID-19 recovery policies with climate change actions. In particular, it calls upon actors in the region to use scenario-analysis to guide responses and planning (e.g., when incorporating key economic infrastructure areas such as transport, energy and telecommunication into recovery approaches) expand COVID-19 fiscal responses to badly hit sectors, seek support from bilateral or international partners and ultimately update NDC actions in 2021 to align with COVID-19 recovery.⁹ In the same

vein, United Nations Climate Change Executive Secretary Patricia Espinosa underscored that postponing meetings of the climate negotiations “does not change the need to continue addressing climate change or to boost ambition, and the need to submit NDCs by the end of this year.”¹⁰

The latest United in Science report for 2020 has demonstrated that climate change did not stop for COVID-19, despite several months of reduced GHG emissions during lockdown. Global carbon dioxide emissions rose by 62 per cent between 1990 and 2019.¹¹ Transformational action can no longer be postponed if the Paris Agreement targets are to be met.

Notes:

¹ ESCAP (2020): The Impact and Policy Responses for COVID-19 in Asia and the Pacific. URL: www.unescap.org/sites/default/files/COVID%20_Report_ESCAP.pdf

² Ibid

³ ESCAP (2020): Progress of NDC Implementation in Asia-Pacific – Methodological Framework and Preliminary Findings, December 2020

⁴ See <https://news.un.org/en/story/2020/04/1060902>

⁵ See <https://news.un.org/en/story/2020/04/1062752>

⁶ UNFCCC (2020): Petersberg Climate Dialogue: Green Recovery will lead to a more resilient future. URL: <https://unfccc.int/news/petersberg-climate-dialogue-green-recovery-will-lead-to-a-more-resilient-future>

⁷ ESCAP (2020): Are countries in the Asia-Pacific region initiating a “Green Recovery”? What more can be done?. URL: www.unescap.org/resources/environment-and-development-policy-brief-2020-1-are-countries-asia-pacific-region

⁸ ESCAP, Progress of NDC Implementation in Asia-Pacific

⁹ ESCAP, Impact and Policy Responses for COVID-19 in Asia and the Pacific

¹⁰ UNFCCC (2020): Work on National Climate Plans Is Not on Hold – UN Climate Chief. URL: <https://unfccc.int/news/work-on-national-climate-plans-is-not-on-hold-un-climate-chief>

¹¹ See https://public.wmo.int/en/resources/united_in_science

United in Science



Source: WMO (2020)

Reflection of the discussions held at the Climate Action Summit 2019

Responding to the alarming findings from scientific studies, the United Nations Secretary-General called for urgent action to scale up mitigation and adaptation activities at the Climate Action Summit in September 2019, which was attended by leaders from governments, business and civil society, including youth. The Summit outlined short-term (by 2020), mid-term (2030) and long-term perspectives towards net zero emissions by 2050 and focused on nine interdependent action areas that highlight the immediate potential for action in the year 2020.¹³ While ‘mitigation’, ‘social and political drivers’

as well as ‘youth and public mobilization’ represent cross-cutting approaches, specific transformative actions are discussed for the areas of ‘energy transition’, ‘climate finance and carbon pricing’, ‘industry transition’, ‘nature-based solutions’, ‘cities and local action’ as well as ‘resilience and adaptation’. A broad range of transformative initiatives were launched at the summit that have the potential to significantly reduce GHG emissions or strengthen adaptation and resilience.

Figure 1: Climate action areas of the United Nations Secretary-General



Source: Climate Action Summit, 2019

Linkages between the Paris Agreement and the SDGs

The Paris Agreement and the 2030 Agenda for Sustainable Development are intricately interlinked, compatible and mutually supportive international development frameworks. In that respect, an acceleration of the Paris Agreement in the upcoming decade must be discussed in strong correlation with the achievement of the SDGs. The 2019 SDG Summit, which was held right after the Climate Action Summit, formulated the aim to accelerate SDG progress through various actions, including climate related actions.¹⁴ As illustrated in Figure 3, several SDGs in addition to Goal 13 on climate action reflect elements and objectives of the Paris Agreement. There are various additional interlinkages, some relating directly to articles of the Paris Agreement, others coinciding with specific targets and activities of NDCs (interlinkages in the figure are symbolized via arrows and highlighted SDG fields). The Stockholm Environment Institute (SEI) has analysed the connections between NDC activities and SDGs and found more than 7,000 correlations.¹⁵ These connections also strongly reflect the six action areas of the Climate Action Summit. The action areas featured most prominently in this regard are energy transition (SDG 7), nature-based solutions (SDG 15), resilience and adaptation (SDG 2/3/6) as well as climate finance and carbon pricing (element of SDG 17). At the Asia-Pacific regional level, ESCAP provides support for the effective implementation of the 2030 Agenda and the Paris Agreement through regional and subregional dialogues and processes.¹⁶

Beyond the action areas of focus, SDGs provide a framework to boost the economy overall. Fulfilling the basic needs of the people (SDG 1, SDG 2, SDG 3) allows for new human capacities development (SDG 4). Expanding human skills and knowledge also improves the technological development and innovation (SDG 9), which in turn improves jobs available and economic value (SDG 8). Through tax and subsidy reforms (SDG 12) long-standing

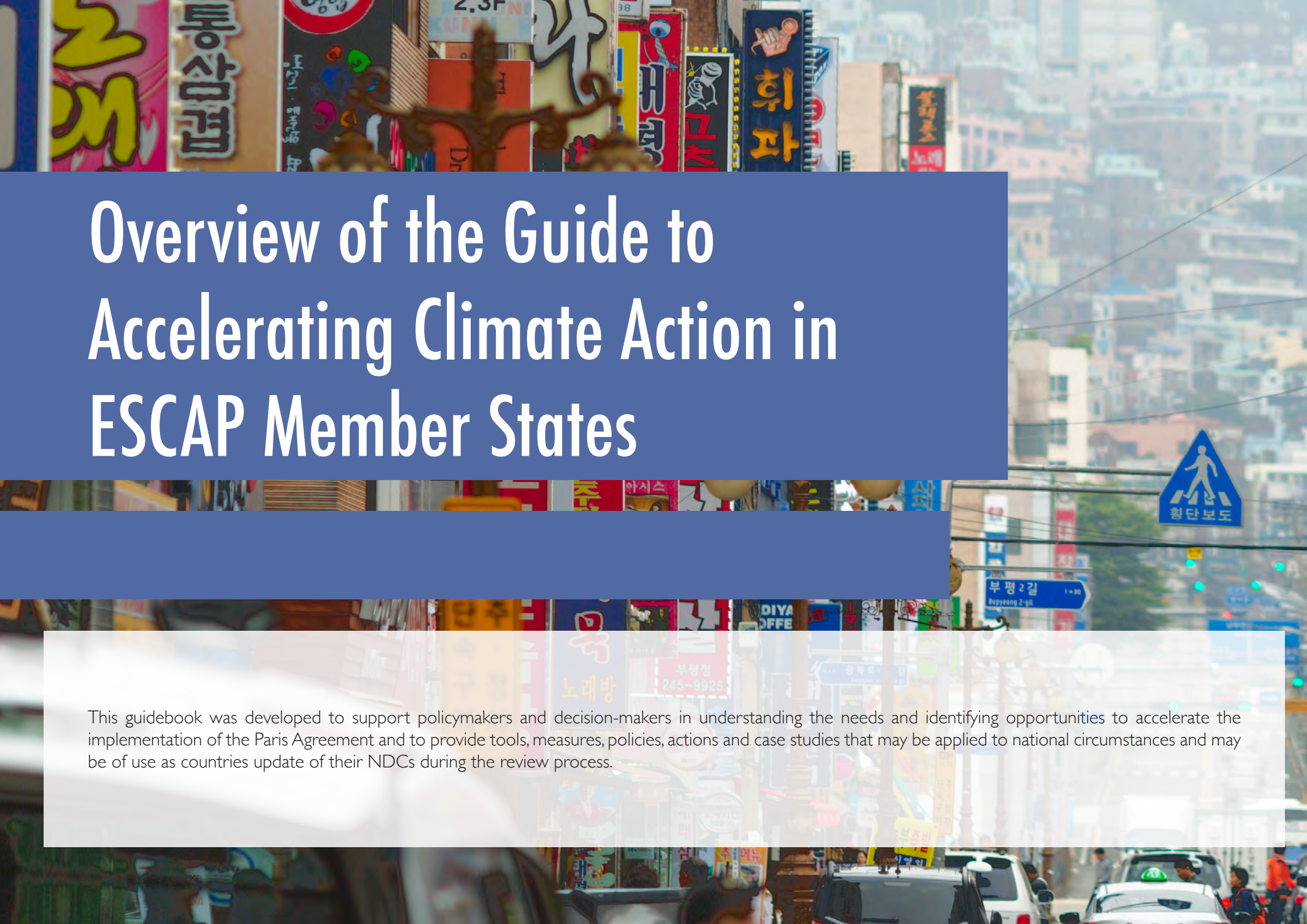
policies which impede the transition away from fossil fuels can be overturned in favour of more diverse, sustainable energy sources (SDG 7).

In the analyses of SDGs and each action area, interlinkages are identified based on context and on textual cross-references of the SDG targets. Analyses are not necessarily exhaustive or exact to every situation, but provide a broad overview of interrelated factors from the perspective of climate action. A repeated feature reflected in all the SDG interlinkages is the importance of capacity-building, technology transfer, inclusive institutions and sustainable development education. Progress in all action areas is linked to these targets because they strengthen a society's collective knowledge and long-term potential for developing and implementing activities for climate action.

Figure 2: Prominent interlinkages between the Paris Agreement, action areas of the Climate Action Summit and the SDGs

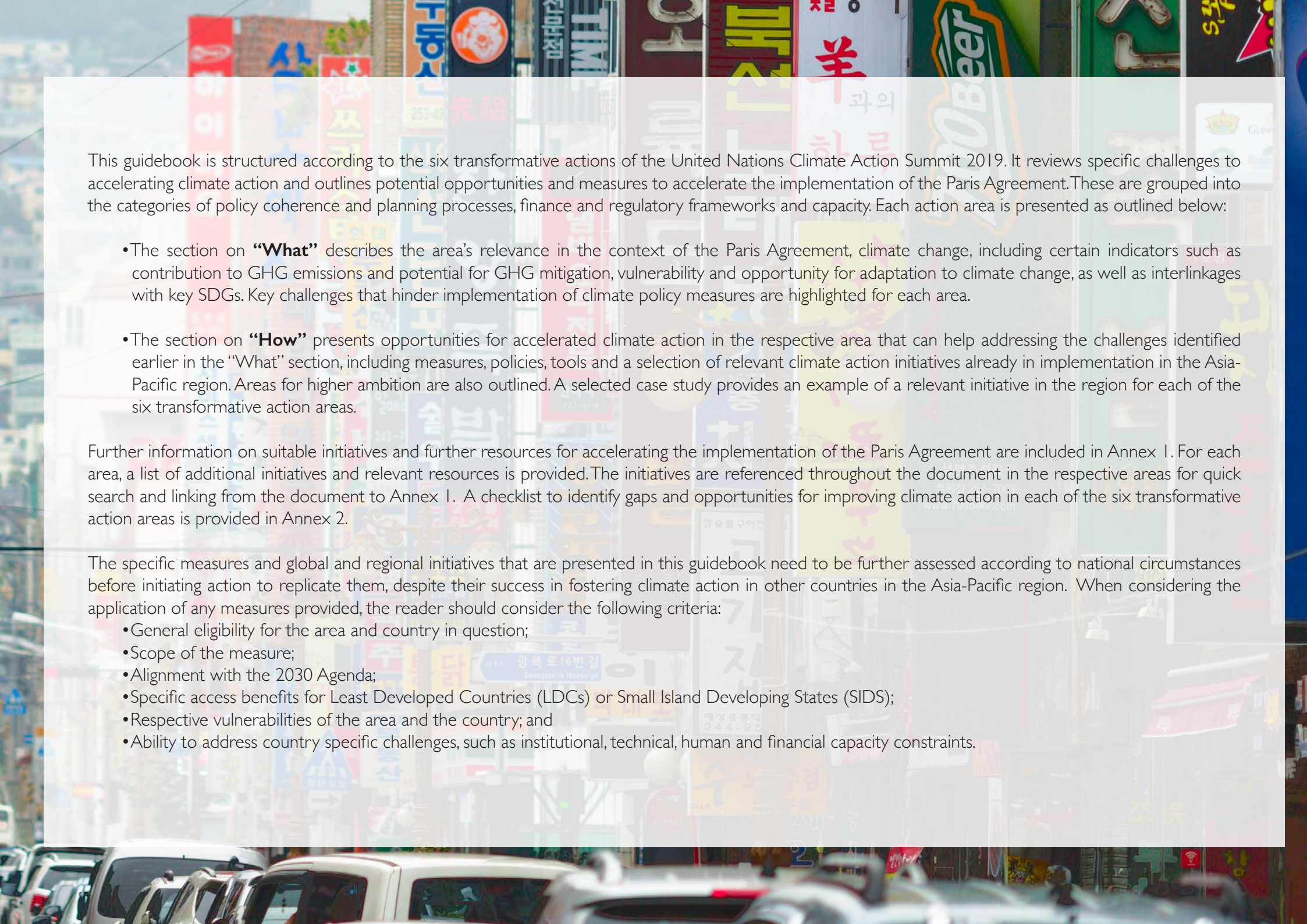


Source: Adapted from SEI (2019)

The background image shows a vibrant, busy street scene in South Korea. In the foreground, there are numerous colorful vertical signs with Korean text, including '통신회선' (Telecommunications Line) and '회파' (Return). A blue pedestrian crossing sign with a white figure and the text '횡단보도' (Crosswalk) is visible on the right. In the background, a dense urban landscape with buildings and a clear sky is visible. A blue street sign for '부평 2길' (Bupyeong 2-gil) is also present.

Overview of the Guide to Accelerating Climate Action in ESCAP Member States

This guidebook was developed to support policymakers and decision-makers in understanding the needs and identifying opportunities to accelerate the implementation of the Paris Agreement and to provide tools, measures, policies, actions and case studies that may be applied to national circumstances and may be of use as countries update of their NDCs during the review process.



This guidebook is structured according to the six transformative actions of the United Nations Climate Action Summit 2019. It reviews specific challenges to accelerating climate action and outlines potential opportunities and measures to accelerate the implementation of the Paris Agreement. These are grouped into the categories of policy coherence and planning processes, finance and regulatory frameworks and capacity. Each action area is presented as outlined below:

- The section on **“What”** describes the area’s relevance in the context of the Paris Agreement, climate change, including certain indicators such as contribution to GHG emissions and potential for GHG mitigation, vulnerability and opportunity for adaptation to climate change, as well as interlinkages with key SDGs. Key challenges that hinder implementation of climate policy measures are highlighted for each area.
- The section on **“How”** presents opportunities for accelerated climate action in the respective area that can help addressing the challenges identified earlier in the “What” section, including measures, policies, tools and a selection of relevant climate action initiatives already in implementation in the Asia-Pacific region. Areas for higher ambition are also outlined. A selected case study provides an example of a relevant initiative in the region for each of the six transformative action areas.

Further information on suitable initiatives and further resources for accelerating the implementation of the Paris Agreement are included in Annex I. For each area, a list of additional initiatives and relevant resources is provided. The initiatives are referenced throughout the document in the respective areas for quick search and linking from the document to Annex I. A checklist to identify gaps and opportunities for improving climate action in each of the six transformative action areas is provided in Annex 2.

The specific measures and global and regional initiatives that are presented in this guidebook need to be further assessed according to national circumstances before initiating action to replicate them, despite their success in fostering climate action in other countries in the Asia-Pacific region. When considering the application of any measures provided, the reader should consider the following criteria:

- General eligibility for the area and country in question;
- Scope of the measure;
- Alignment with the 2030 Agenda;
- Specific access benefits for Least Developed Countries (LDCs) or Small Island Developing States (SIDS);
- Respective vulnerabilities of the area and the country; and
- Ability to address country specific challenges, such as institutional, technical, human and financial capacity constraints.



Energy Transition

Area 1



What energy transition means for implementing the Paris Agreement

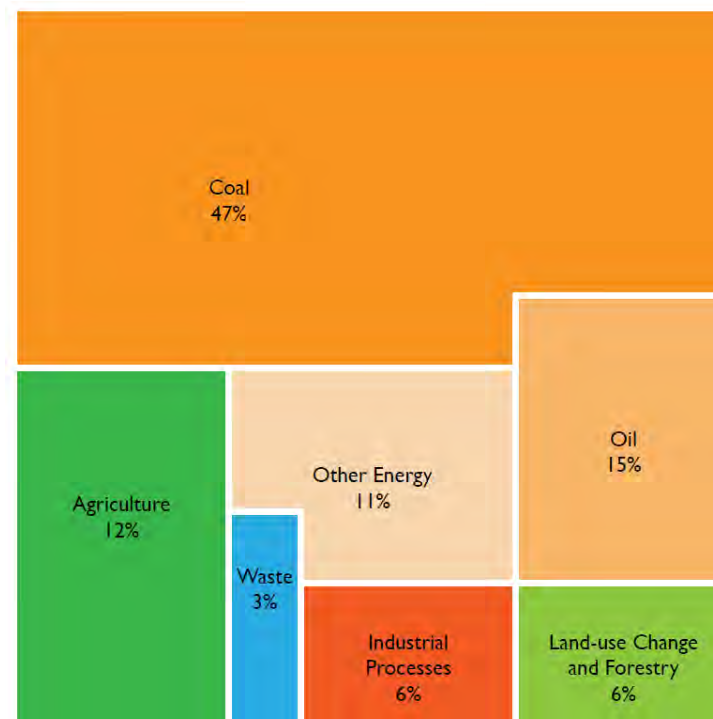
Under the action area on **energy transition** the opportunities for a shift away from fossil fuels towards sustainable and renewable energy sources are discussed. A range of options, such as accelerating deployment of renewable energies, enhancing energy efficiency, facilitating energy storage, providing universal access to sustainable and clean energy and innovation, supported by sustainable investments¹⁷ are identified as key to accelerating the global energy transition.

Relevance of energy transition for accelerating climate action

The energy sector is by far the largest contributor to global and national GHG emissions (see Figure 3). The Asia-Pacific region plays an important role in this regard, since approximately 38 per cent of global energy related GHG emissions are attributed to the region, with more than 75 per cent stemming from the energy sector.¹⁸ According to the IPCC, annual GHG emissions originating from the global energy supply sector grew 3 per cent per year from 2000 to 2010 and are still continuing this trend.¹⁹ The main drivers of this trend are high energy demand associated with rapid economic growth and an increase in the share of coal in the fuel mix in the Asia-Pacific region. The region has a unique opportunity to seek ambitious energy transition pathways that will reconcile the following: (1) increasing the energy supply to meet growing demand; (2) enhancing long-term energy security; (3) meeting the SDG 7 targets; and (4) achieving GHG emission reductions under the Paris Agreement NDCs.²⁰

At the same time, the energy sector is also vulnerable to climate change, and existing and future energy systems need to become more climate resilient to mitigate existing risks. Achieving the global energy transition is therefore key for combating climate change and increasing the resilience of our energy systems.

Figure 3: Global GHG emissions by sector and energy source, 2016



Source: Climate Watch Data Explorer (2020)

References in the Paris Agreement

Energy sector is at the core of achieving the Paris Agreement targets of stabilizing the global temperatures by reducing the intensity of GHG emissions from energy production and consumption (electricity, heat, fuels, transport) and by improving the energy efficiency of all industrial processes, buildings

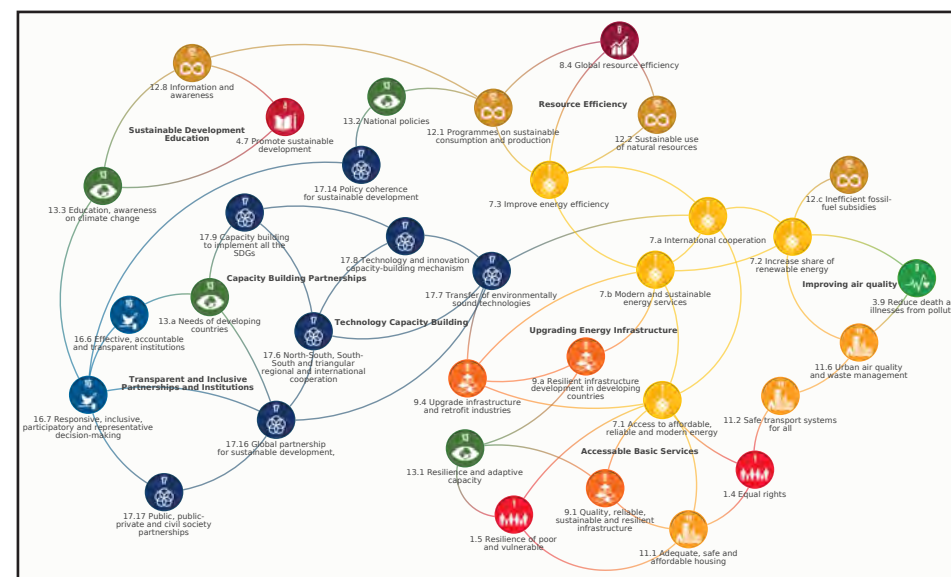
and homes. The long-term goal to reach a net zero balance of anthropogenic emissions in the second half of this century can only be reached by a nearly complete decarbonization of the energy sector.

Linkages to SDGs

Energy is fundamentally linked to many SDGs. SDG 7 (affordable and clean energy) directly relates to the energy transition in providing energy access (target 7.1), increasing the share of renewables in the global energy mix (target 7.2) and doubling the global rate of improvement in energy efficiency (target 7.3). However, the energy transition has major influence on other SDGs, such as SDG 1 (no poverty), SDG 3 (good health and well-being), SDG 8 (decent work and economic growth), SDG 9 (industry, innovation and infrastructure), SDG 11 (sustainable cities and communities), SDG 12 (sustainable consumption and production) and SDG 13 (climate action).

The energy transition, in particular the provision of universal access to affordable, reliable and modern energy, is key to other related basic services (targets 9.1, 11.1) for all people, especially the most marginalized and at-risk to climate shocks (targets 1.4, 1.5). Access to energy (target 7.1) also implies an increase of safety and security, contributing to reducing the incidence of violence (target 16.1) and to the empowerment of women and the reduction of inequalities (target 10.2) between sexes. There is an increasing role for women in promulgating clean energy infrastructure development (targets 5.a, 5.b), in particular in rural areas in the Asia-Pacific region, which has contributed to new opportunities for economic growth. Increasing the share of renewables results in improved air quality thanks to the reduction in polluting emissions (targets 3.9, 11.6). Finally, improvements in the efficient use of energy (target 7.3) contribute to improvements for greater resource efficiency overall (targets 8.4, 12.1, 12.2) and greater productivity (target 8.2).

Figure 4: SDG interlinkages in the context of energy transition for climate action



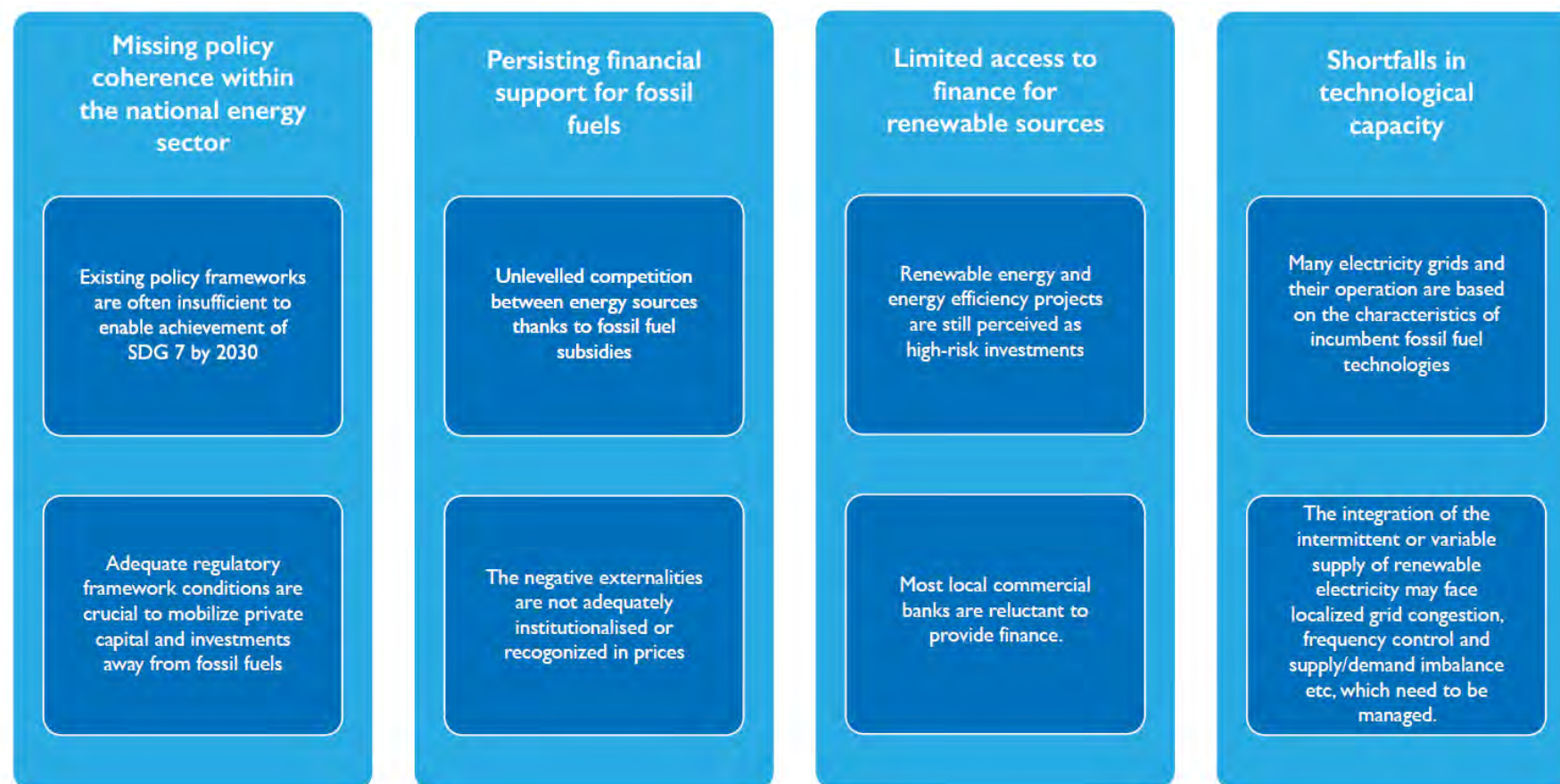
Source: ESCAP analysis

Challenges to accelerating energy transition

Enhancing the energy transition while meeting an ever-growing demand for energy supply due to development progress requires addressing multiple

converging challenges in the Asia-Pacific region, including those detailed in Figure 5.

Figure 5: Challenges to accelerating energy transition



Source: United Nations (2019b)

How to accelerate energy transition for Paris Agreement implementation

The energy transition is already underway in the Asia-Pacific region, but it is questionable whether the current rate of progress will be sufficient to achieve the Paris Agreement goal of keeping global temperature increases below 2°C. The IPCC has advised that the achievement of the 'increased ambition' of keeping global temperature rise below 1.5°C will require emissions to reach 'net-zero' around 2050. This would in turn demand a minimum renewable energy share of 60 per cent in the total primary energy supply. However, in 2018 the renewable energy share of the Asia-Pacific region was estimated to be 18.2 per cent of the total primary energy supply.

For the achievement of the Paris Agreement goals, the region needs to urgently accelerate:

- Energy efficiency of industry and cities with 60-70 per cent renewable energy supply;
- Decarbonization of the electricity grid, with rapid phase-out of coal and electrification of energy end uses to enable increased renewable contributions;
- Deep reductions in agricultural emissions; and
- Advancement of carbon capture, carbon storage and reuse, and sequestration measures.

This section presents opportunities for accelerated climate action in the area of energy, including opportunities and instruments, relevant initiatives, and additional resources supporting a continued energy transition in the Asia-Pacific region.

Opportunities to promote climate action in the energy sector

There are a considerable number of activities and initiatives dedicated to strengthening national climate policies and accelerating a global energy transition in support of Paris Agreement implementation. These initiatives aim to provide countries and relevant stakeholders with measures and tools related to important policy and technology options to enable the progress of national energy transitions.²¹

Policy coherence and planning processes

Accelerating the action towards an ambitious energy transition in the Asia-Pacific region in an adequate and sustainable manner requires the concerted action of various stakeholders. To raise the ambition of NDC, governments

could consider the following aspirational points:

- Just transition plans are creating number of jobs in clean energy and other growing sectors that are above the level of jobs that will be lost from the closing down of fossil fuel plants;
- Employment policies are incentivising clean energy transition; and
- Smart grid technologies can expand to smooth prices, balance supply with demand and increase the integration of renewables.

» Measures supporting policy coherence and planning processes

- **Energy and SDG 7 road maps** are a very effective measure for planning of sectoral energy transition. These assist national policymakers

with developing specific targets, technology choices, assessment of financial viability, generation of investor interest, shared knowledge and best practices, together with progress monitoring and reporting. In addition, these roadmaps provide substantive elements for the NDCs. The International Renewable Energy Agency (IRENA) has supported multiple countries in the past in developing such road maps and provides examples on their website.²² ESCAP provides support for the development of SDG 7 road maps as well through the deployment of the National Expert SDG Tool for Energy Planning (NEXSTEP).²³

- **Technology transfer** is a bottleneck in hindering an energy transition towards low-carbon alternatives, which can be removed through fostering dedicated networks and training on the latest energy-related solutions. Examples include the Climate Technology Centre and Network (CTCN), which has been established under the UNFCCC and will also serve the Paris Agreement.²⁴
- Fostering a **dialogue with the local and international private sector** ensures the availability of suitable on- and off-grid solutions for the local energy transition and finance which will support the development of clean energy infrastructure. For instance, IRENA holds a general assembly of the industry on an annual basis, or there are dedicated industry forums, such as the Global Association for the Off-grid Solar Energy Industry (GOGLA).
- Ongoing processes for revision of **NDCs** and development of **National Adaptation Plans (NAPs)** need to be aligned with national planning processes.

» Relevant initiatives supporting policy coherence and planning processes

- The **Climate Ambition Alliance** (*Index I – I*) includes 280 members (more than 60 countries together with regions, cities, businesses and investors) that committed to carbon neutrality. The Alliance led by Chile, UNDP and the UNFCCC will continue its work to enlist more countries and entities to enhance the ambition of NDCs and prepare strategies to become carbon neutral by 2050.

- Under the **Powering Past Coal Alliance (PPCA)** (*Index I – 2*) more than 32 countries, 25 subnational governments and 34 companies have committed to work together to accelerate the transition from coal to clean energy.
- The **Association of Southeast Asian Nations (ASEAN)** (*Index I – 9*) commitment to increase of primary renewable energy from 9.4 per cent in 2014 to 23 per cent by 2025.²⁵ SAARC Energy Centre is developing institutional linkage with ASEAN Centre for Energy (ACE) located in Jakarta, Indonesia, which will foster further regional cooperation for promoting renewable energy.

Finance and regulatory frameworks

Creating an enabling investment environment will be essential for attracting the required public and private investments for scaling up climate action. This includes levelling the playing field for renewable energy through eliminating subsidies for fossil fuels and applying carbon pricing instruments and investing the revenues into clean, affordable and renewable energy generation. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Internalize external costs from energy production using air pollution charges, and shift taxes from profits to pollution;
- Establish processes for the phasing out coal and halting any new projects, and develop regulatory frameworks for decommissioning of existing coal power plants; and
- Encourage household renewable energy generation through enabling the ease of connection and by providing tax incentives, rebates and feed-in tariffs.

» Supportive measures for finance

Dedicated financial support instruments exist to assist developing countries in accessing required funding, such as:

- The financial mechanism of UNFCCC offers financial instruments for mitigation in relation to the energy sector;
- Outside of the financial mechanism of UNFCCC, there is a broad

variety of climate financial instruments to support energy-sector related investments. This includes, for example, **multilateral development banks (MDBs)** such as the Asian Development Bank, as well as multilateral funds such as the **Climate Investment Funds (CIF)**, which have dedicated windows for renewable energy technologies and energy access.

- As certain renewable energy technologies have already reached maturity and have been around for some time, to attract **private investors** can also play a significant role for investments in the energy sector, including through the national **financial and capital markets**.
- **National climate change funds** can also blend international, domestic and private capital for addressing climate purposes, including for energy.

» Relevant initiatives for finance

- The **Climate Investment Platform** (*Index 1 – 5*) supports decluttering the climate finance landscape and providing integrated and streamlined support to developing countries, emerging economies and the private sector. Support is offered by partner institutions such as the Green Climate Fund (GCF), UNDP, Sustainable Energy for All (SEforAll), IRENA and the Renewable Energy Policy Network for the 21st Century (REN21) among others.
- The **Clean Cooking Fund (CCF)** (*Index 1 – 7*) supports scaling up public and private investment in the clean cooking sector. The Fund will catalyse \$1 billion in investments, which would support a sizable stream of businesses along the supply chain delivering clean cooking solutions, as well as develop an impact bond market for the clean cooking sector which can attract a broad range of capital.
- The **Renewable Energy and Energy Efficiency Partnership (REEEP)** (*Index 1 – 10*) develops innovative, efficient financing mechanisms to advance market readiness for clean energy services in low- and middle-income countries. REEEP invests primarily in disruptive approaches led by small and medium-sized enterprise (SME) players in low- and middle-income countries, facilitating market- and community-led energy transitions.

- The **Coalition for Sustainable Energy Access** (*Index 1 – 15*) aims to benefit rural, remote and vulnerable areas in developing countries, with special emphasis on LDCs that would have high impact on universal energy access rate via off-grid from solar home systems, mini-grid, on-grid expansion, intensification and densification with cooking energy and productive use with the ambition of “leaving no one behind” through mobilizing competitive energy financing.

Capacity

An effective energy transition rests not only upon the availability of the latest technology, but also on the technical know-how for planning and implementing related projects and activities, which require capacity-building measures. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Engage in support mechanisms such the National Expert SDG Tool for Energy Planning (NEXSTEP) developed by ESCAP to enable policy and strategy capacity development at the national and subnational levels;
- Strengthen local level energy transition by promoting more local scale renewable energy plants and the technology and innovation capacity that is needed for them; and
- Provide technical training for construction and maintenance of maintaining charging stations and electric vehicles.

» Supportive measures for capacity

Dedicated capacity-building support on the energy transition can help to overcome and alleviate challenges.

- **Communities of practice** or dedicated **networks to exchange best practice** examples for energy transitions can play an important role in enhancing the capacity of the local industry. Examples can be found among the initiative, such as the Cool Coalition.
- **Bilateral and multilateral development agencies** are actively supporting countries in building up the required capacities by providing information and setting up dedicated training programmes

(e.g., renewable energy technicians). An example includes the District Energy in Cities Initiative by UNEP.

» Relevant initiatives for enhanced capacity

- **Sustainable Energy for All (SE4All)** - The Sustainable Energy for All initiative (*Index I – 8*) is a multi-stakeholder partnership between governments, the private sector, and civil society. Launched by the United Nations Secretary-General in 2011, the Sustainable Energy for All initiative also acts in support of the 2014–2024 Decade of Sustainable Energy for All, as declared by the General Assembly.
- The **District Energy in Cities Initiative** (*Index I – 4*) is a multi-stakeholder partnership coordinated by UNEP, with international financial support described in detail in the case study in this section.
- The **Cool Coalition** (*Index I – 3*) is a platform that gathers and communicates on all initiatives related to cooling. It is organized around five clusters, each led by a key partner: national governments (led by the Efficient Cooling Initiative of the Climate and Clean Air Coalition), cities (led by the C40 Cities Climate Leadership Group (C40) and IRENA), businesses (led by UNEP), civil society (led by the World Wide Fund for Nature), and finance (led by the World Bank).
- In January 2014, IRENA and 35 players in renewable energy from around the world jointly established the **Coalition for Action** (*Index I – 11*) to promote the wider and faster uptake of renewable energy technologies. The Coalition for Action forms a key international network to discuss industry trends, determine actions, share knowledge and exchange best practices with the vision to drive the global energy transition.
- The **NDC Partnership** (*Index I – 13*) responds to requests for support from member countries, to coordinate, align and maximize support for NDC formulation and implementation among members. It supports countries to bring climate and development goals together within their broader sustainable development agendas by turning NDCs from stand-alone documents into national policies and implementation plans. Through the Climate Action Enhancement Program, the Partnership

delivers targeted support to countries to enhance the quality, increase ambition, and fast-track implementation of NDCs. The Partnership also assist nations in achieving their climate goals by increasing access to knowledge resources and building a peer community around the experiences of countries implementing their NDCs. The NDC Partnership supports activities across all six action areas.

Case study on energy transition from the Asia-Pacific region

Activity title: District Energy in Cities Initiative

Country / region: Global, with Asia-Pacific cities in China, India, Malaysia and Mongolia

Year of implementation: 2014

Developed under which measure / initiative: District Energy in Cities Initiative is one of six accelerators of the Sustainable Energy for All (SEforALL) Energy Efficiency Accelerator Platform, launched at the United Nations Climate Summit in September 2014

Further reading: www.districtenergyinitiative.org

Description of activity

This initiative is a multi-stakeholder partnership coordinated by UN Environment, with financial support from the Global Environment Facility, Danish International Development Agency and the Government of Italy, which supports accelerated local and national investments in modern district energy. The initiative supports local governments to build know-how and implement relevant enabling policies for modern district energy, energy efficiency, zero energy building and renewable energy and provides technical assistance to mobilize climate finance to deliver a project pipeline. The initiative raises awareness on the opportunities and multiple socioeconomic and environmental benefits of district energy and demonstrates viability through pilot projects.

This is a public and private partnership, involving industry associations including Chinese District Energy Association, Euroheat and Power, International District Energy Association, private sector companies (e.g., manufacturers and utilities), financial institutions (e.g., ADB, European Bank for Reconstruction and Development, International Finance Corporation and Kreditanstalt für Wiederaufbau), city networks (such as C40 and Local Governments for Sustainability), academic institutions and national and international organizations (e.g., the Asia Pacific Urban Energy Association and the Energy Resources Institute). The initiative engages cities in China, India, Malaysia and Mongolia. In India, the city of Thane is implementing first district cooling pilot in India with a citywide plan and supportive policies, including through public-private partnerships.

How does the activity help implement the Paris Agreement?

District Energy supports the global energy transition, as modern district energy reduces pollution, saves lives and health expenditure, enables energy storage and renewable energy using untapped waste heat recovery. Such systems are increasingly climate resilient with low carbon intensity, making them a key measure to achieve 100 per cent renewable energy or carbon neutral targets.

Specific “acceleration success factors” of the activity

- Replicate approaches in different cities in the same region to foster industry growth.
- Facilitate the exchange of experiences between city and country partners on district energy innovation and best practice through a cities-for-cities twinning process.
- Provide capacity-building and technical assistance to local governments and their partners to develop enabling policies, address barriers, unlock investment and scale up modern district energy in cities.



The background image shows a large industrial complex, possibly a power plant or refinery, with a tall, striped smokestack emitting a plume of smoke. In the foreground, there is a green field with a small body of water. The sky is blue with some clouds.

Climate Finance and Carbon Pricing

Area 2

What climate finance and carbon pricing mean for implementing the Paris Agreement

The action area of **climate finance** refers to financial resources and investments of public or private origin, contributing through their investment to mitigation or adaptation actions.²⁶ Apart from the provision of financial resources, market-based approaches, which put a price on carbon, can also play an important role in redirecting financial resources to low-carbon alternatives. **Carbon pricing** includes approaches like taxation and emissions trading.

Relevance of climate finance in context of climate change

The scale of global investments required to keep global temperatures below 1.5°C from pre-industrial levels and for mitigation in the energy sector alone is estimated at \$2.4 trillion annually until 2035.²⁷ On strengthening climate resilience with the growing needs of the developing countries, UNEP Adaptation Gap Report estimates that the annual costs of adaptation could range from \$140 billion to \$300 billion by 2030 and from \$280 billion to \$500 billion by 2050.²⁸ Similarly, ESCAP estimates that annual investments of \$590 billion are needed by Asia-Pacific countries on average to secure future clean energy and climate action and to live in harmony with nature.²⁹ International finance mechanisms are the most prominent sources of climate finance but domestic financial institutions are increasingly growing as climate investment sources.³⁰ Another important source for levelling the playing field for climate-friendly solutions versus fossil-fuel based economies are domestic and regional carbon pricing instruments.³¹ According to the latest trend report by the World Bank, market-based approaches are on the rise. As of 2019, there were 57 carbon pricing initiatives implemented or scheduled for implementation.³²

To further enable ambitious climate action in the Asia-Pacific region, the ongoing availability of climate finance for both adaptation and mitigation purposes is essential. According to the latest climate finance reviews, the

Figure 6: Sources of climate financing

| Level | Type | Examples |
|---------------|----------------------------|--|
| International | Finance mechanisms | Green Climate Fund Global Environment Facility Adaptation Fund |
| | Multilateral banks | World Bank Asian Development Bank Asian Infrastructure Investment Bank Islamic Development Bank |
| | Bilateral | Public - government to government Private - commercial banks |
| Domestic | National climate funds | Bangladesh Climate Change Resilience Fund Indonesia Climate Change Trust Fund |
| | National development banks | China Development Bank Development Bank of the Philippines |
| | National commercial banks | Commonwealth Bank of Australia Golomt Bank (Mongolia) |
| | National capital | National budgets Innovative sources |

region is already a major recipient of public climate finance. From 2015–2016, countries in the region received 31 per cent of the funding of multilateral climate funds, 42 per cent of bilateral climate finance and 41 per cent of green investments made by multilateral development banks.³³ This highlights a positive and favourable investment environment in the region for climate action, which can help the countries to further mobilize private resources for future climate projects.

Despite being a large beneficiary of existing climate finance flows, countries in the Asia-Pacific region still need to do more to integrate climate considerations in their development pathways and create enabling environments at the national level (e.g., climate change supportive policies and strategies)³⁴ to support a continuing inflow of climate finance and to encourage local stakeholders, especially the private sector, to invest in low-carbon, climate-resilient projects. This accounts especially for adaptation finance, a key priority for SIDS in the region.

References in the Paris Agreement

Climate finance is reflected across different sections of the Paris Agreement. First of all, among the three long-term objectives is a call for “making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development” (Article 2.1 (c)).³⁵ Second, it includes the provision that developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation actions (Article 9).³⁶ Parties are also encouraged to ensure a balance between adaptation and mitigation support, that country-driven

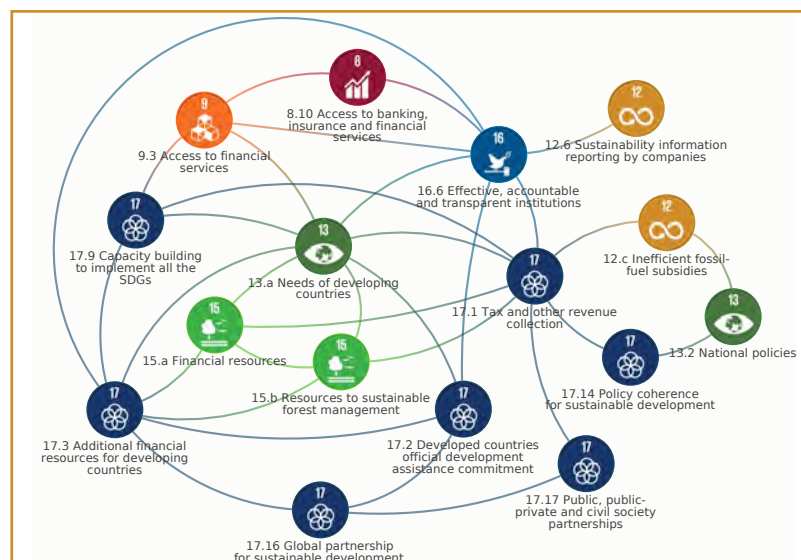
strategies shall be taken into consideration and that the priorities and needs of particularly vulnerable developing countries shall be put at the center of attention. Article 9 also states that Parties are encouraged to report on both climate finance provided and received.³⁷ Carbon pricing is reflected under Article 6. However, the exact details of the carbon trading component of the Paris Agreement are still subject to the ongoing climate change negotiations, envisioned to be resolved by the end of COP26 in 2021.³⁸

Linkages to SDGs

Climate finance is linked with SDG 13 (climate action), especially with target 13.a *Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly USD 100 billion annually by 2020*. In addition, financial resources for climate purposes, among other sustainable development targets, also play a role under SDG 17 (partnerships for the goals). While multiple targets under this goal address financial aspects (targets 17.1–17.5), target 17.3 *Mobilize additional financial resources for developing countries from multiple sources* can also be interpreted as being linked to additional resources for climate finance.³⁹ Provisions for phasing out of fossil fuel subsidies and the use of market instruments are made in SDG 12 (responsible consumption and production) (target 12.c).

Irrespective of the source of climate finance, be it from domestic sources (target 17.1), overseas development aid (target 17.2) or from other sources (target 17.3) effective and transparent institutions (target 16.6) are key to reliable and stable transfers of wealth. Capacity-building (target 17.9) will also play a role in increasing the ability to access and use these financial resources. Besides governments, access to climate conscious financial services for industrial actors will expand green investments throughout the broader economy.

Figure 7: SDG interlinkages in the context of climate finance and carbon pricing for climate action



Source: ESCAP analysis

Challenges to accelerating climate finance

Parties to UNFCCC agreed to collectively mobilize \$100 billion from public and private sources on an annual basis from 2020 onward to support ambitious climate action.⁴⁰ However, several challenges in relation to climate finance need to be addressed.

- **Meeting the agreed climate finance targets:** This refers especially to the \$100 billion that must be mobilized as well as to a new, even higher annual target, which is to be agreed for post-2024. Complying with this target is not only important in the light of the estimated investment needs for climate action, but also to maintain the trust in collective action between developed and developing Parties to achieve the objectives of the Paris Agreement.
- **Ensuring climate finance readiness of developing countries:** Mobilizing the required climate finance is one side of the coin; being able to spend it for meaningful and effective climate action is the other.

Developing countries need to rise to the challenge to provide potential financiers with bankable projects and put reliable institutions in place, to plan, implement and monitor the spending of climate finance/ investments.

- **Understanding what it means to make financial flows consistent with the Paris Agreement:** This long-term target of the Paris Agreement represents a goal that may not be easy to grasp, yet it bears great potential for accelerating ambition. Countries need to take into consideration how to incentivise a more rigorous spending of domestic public and private financial resources for climate action and to stimulate divestment from activities with negative implications on the climate (e.g., fossil fuel energy).⁴¹

How to accelerate climate finance and carbon pricing for Paris Agreement implementation

The amount of climate financing used in the Asia-Pacific region is increasing year on year; countries in North-East Asia, South-East Asia and the Pacific receive the largest climate finance flows, at 41 per cent or \$238 billion in 2017-2018.⁴² However, estimates suggest that global investment must still increase in order to realize a 1.5°C scenario. A favourable environment must be fostered to incentivise such investment. The flows of climate finance shall be directed from developed countries to developing countries, while South-South cooperation is also encouraged.⁴³ In their initial NDCs, developed and developing countries already identified a set of targets and actions, whose implementation is made conditional on the provision of the promised support.⁴⁴ This includes engagement of the private sector and increasing accessibility of climate finance to generate demand. This section identifies opportunities and instruments for accelerating access to climate finance and describes relevant initiatives and further resources in this regard.

Opportunities to enhance climate finance

Climate finance and carbon pricing are cross-cutting themes under the Paris Agreement, underpinning the implementation of all climate action mentioned outlined in the NDCs. The High-Level Commission on Carbon Prices, a group of leading economists working with the Carbon Pricing Leadership Coalition, estimated that the carbon price level consistent with achieving the Paris temperature target is at least \$40-\$80 per tCO₂ by 2020 and \$50-\$100 per tCO₂ by 2030.⁴⁵

Policy coherence and planning processes

Governments are encouraged to guide financial flows towards climate action through the introduction of incentivising policies, public investment programmes and transparent tracking of national climate finance flows. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Position climate action in the regulatory frameworks of their central banks;
- Make national budgeting processes participatory and set budget targets that directly support NDC targets by identifying co-benefits; and

- Make all national development planning climate-action driven.

» Measures supporting policy coherence and planning processes

- With the NDCs representing the major strategic framework for national climate action, countries are encouraged to set up **investment plans** to be able to reach the set-up targets and activities.⁴⁶ These can comprise both domestic and international resources.
- **Carbon pricing instruments** provide an effective and efficient approach to stimulate national private sector to reduce its carbon footprint. Putting a price on carbon can be implemented through taxation or emissions trading, or a mix of both. Prominent examples in the Asia-Pacific region on carbon pricing include, for example, Singapore's carbon pricing scheme and emissions trading schemes in China, Kazakhstan and the Republic of Korea.⁴⁷
- Another approach to redirecting financial capital towards low-carbon investments can be the introduction of a **green banking regulation** set by national central banks. This can be as strict as prescribing financial institutions a certain limit for carbon-intensive investments

and increasing investments in low-carbon projects, setting up carbon footprint reporting for the private sector and financial institutions so that investors can make informed choices, whether to support projects in the area of fossil fuels. The International Finance Corporation maintains a Sustainable Banking Network where central banks of member countries can exchange their experiences.⁴⁸

- Ongoing processes for revision of **NDCs** and development of **NAPs** need to be aligned with national and sectoral budgeting to ensure national financial resources to support implementation.

» Relevant initiatives supporting policy coherence and planning processes

- The **FSB Task Force on Climate-related Financial Disclosures** (*Index II – 4*) develops voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers, and other stakeholders. The initiative 'Commit to implement the recommendations of the Task Force on Climate-related Financial Disclosures' is an update to the previous We Mean Business coalition initiative 'Commit to report climate change information in mainstream reports as a fiduciary duty'.
- A growing group of companies are using an internal carbon price to help manage climate risk and align themselves with the low-carbon transition. By making this commitment, companies are agreeing to align with the United Nations Global Compact's **Business Leadership Criteria on Carbon Pricing** (*Index II – 5*).
- The **Carbon Pricing Leadership Coalition (CPLC)** (*Index II – 7*) is a voluntary initiative that catalyses action towards the successful implementation of carbon pricing around the world. The CPLC brings together leaders from government, business, civil society and academia to support carbon pricing, share experiences and enhance the global, regional, national and subnational understanding of carbon pricing implementation.
- **Climate Finance Access Network (CFAN)** (*Index II-13*) supports developing countries in securing and structuring finance for climate

investments. By cultivating a network of highly trained, embedded climate finance advisors, CFAN will build the capacity of developing countries to more quickly access climate finance and achieve their climate objectives. CFAN offers services to all developing countries with a focus on LDCs, SIDS and African countries.

Finance and regulatory frameworks

Bringing forward established approaches to tackling climate change as well as supporting innovations requires the availability of different kinds of financial products from both public and private resources. In addition, the Paris Agreement proclaims to make all financial flows consistent with its objectives, meaning that the financial sector needs to shift towards low-carbon spending. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Establish national climate funds on the basis of taxation in polluting industries and activities and other relevant taxes;
- Establish investment laws that include climate action conditionalities in their investment promotion criteria; and
- Increase demand for climate finance products and services through new rules on commercial lending.

» Supportive measures for finance

Dedicated financial support instruments exist to assist developing countries in accessing required funding:

- The **financial mechanism of UNFCCC** offers financial instruments for multiple purposes related to climate action. The mechanism is comprised of several multilateral climate funds (e.g. GEF, GCF), which also serve the Paris Agreement.⁴⁹
- In addition to the funds under the financial mechanism, there are also further **multilateral climate finance instruments** vehicles, funding projects and programmes in the area of climate change. These include MDBs (e.g., World Bank, ADB) as well as dedicated climate finance facilities (e.g., CIF, LDC Fund/Special Climate Change Fund).
- As **domestic finance** plays an increasing role for the implementation

of climate adaptation, important climate finance measures may include the establishment of national climate funds or encouraging other national funds (e.g., pension funds) to invest in climate projects.

- Another measure for domestic finance is the establishment of a **tracking system of tagging climate action related expenditure**. This informs the planning process for climate action and can also be a guide for further crowding in resources from international finance institutions. An example of such tracking is the UNDP Climate Public Expenditures and Institutional Review (CPEIR).⁵⁰
- There are various mechanisms that engage the private sector in financing climate action, including under GCF⁵¹ and MDBs.⁵²
- Reflecting the role of forests, a national strategy and/or action plan is required to access results-based payments for the initiative on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD+) under UNFCCC.⁵³

» Relevant initiatives for finance

- In April 2019, governments from more than 20 countries launched the **Coalition of Finance Ministers** (*Index II – 1*) for Climate Action, which recognized the challenges posed by climate change. The Coalition will help countries mobilize and align the finance needed to implement their national climate action plans, establish best practices such as climate budgeting and strategies for green investment and procurement, and factor climate risks and vulnerabilities into members' economic planning.
- The **Climate Investment Platform** (*Index II – 2*) will seek to directly mobilize \$1 trillion in clean energy investment by 2025 in 20 LDCs. The platform will provide a menu of services to governments and private sector clients in their efforts to scale up energy transition and accelerate investments for low carbon, climate-resilient development.
- The **Net Zero Asset Owner Alliance** (*Index II – 3*), a group of the world's largest pension funds and insurers, responsible for directing more than \$2 trillion in investments, is committed to transitioning to carbon neutral investment portfolios by 2050. The members of the

Alliance will immediately start to engage with companies in which they are investing to ensure they decarbonize their business models.

- The **Joint Crediting Mechanism** (*Index II-1 2*) facilitates the diffusion of leading low carbon technologies, products, systems, services, and infrastructure as well as the implementation of mitigation actions, and it contributes to the sustainable development of developing countries. It appropriately evaluates contributions to GHG emissions reductions or removals from Japan in a quantitative manner, by applying measurement, reporting and verification methodologies, and uses them to achieve national emissions reductions targets. The Joint Crediting Mechanism contributes to the ultimate objective of UNFCCC by facilitating global actions for GHG emissions reductions or removals, complementing the Clean Development Mechanism

Capacity

It is not only important to ensure the availability of climate finance, but there is also a need to build up the skills required to access this finance and to manage the resources accordingly. Dedicated capacity-building programmes should train a wide variety of stakeholders along the implementation of climate change projects (e.g., project developers, public sector stakeholders, investment officers). To raise the ambition of NDCs, governments could consider the following aspirational points:

- Create a specific “job family” in the public sector comprising climate and/or green finance officers with specific capacity and mandate to increase public spending on climate/green finance;
- Ensure that climate finance is integrated in the curricula of public universities and other educational institutions; and
- Build institutional knowledge to access, budget and monitor resources from multilateral climate funds.

» Supportive measures for capacity

Dedicated capacity-building support on mobilizing climate finance or designing financial products can help to overcome and alleviate challenges.

- To support stakeholders in accessing climate finance products,

multilateral climate finance institutions offer so-called **readiness funding**. This can be used to support multiple steps within the funding process, such as funding proposal development, institutional strengthening for potential implementing partners or the development of strategic frameworks.

- Bilateral and multilateral development agencies are actively supporting countries in building up the required capacities by providing information and setting up dedicated **training programmes on accessing climate finance**.
- On carbon pricing, exchange platforms with regional peers or countries with similar market conditions are an important source for capacity-building. In the international carbon pricing community, there have already been **networks** established to exchange information about best-practice approaches.
- Concerning the climate finance readiness of the banking sector, an effective measure can also be to invest in the **training of local finance sector institutions** to raise awareness about climate-friendly investment projects and to enable them to undertake suitable risk assessments, for example, related to renewable energy technologies. Dedicated capacity-building programmes should train a wide variety of stakeholders to develop and use climate action financial projects (e.g., project developers, public sector stakeholders, investment officers).

» Relevant initiatives for enhanced capacity

- The **Partnership for Market Readiness** (*Index II – 6*) was launched in 2010 to help establish carbon markets in developing, emerging and transition countries. The secretariat function is performed by the World Bank. Guided by the needs of the partner countries, the Partnership for Market Readiness is pursuing various approaches, such as the development of national emissions trading systems or new market instruments (new market mechanisms, carbon taxes and national certification standards).
- UNEP, UNDP and the World Resources Institute set up a **GCF Readiness Programme** (*Index II – 8*) to support countries in

accessing climate finance from the GCF. Support is provided in different areas, ranging from strategic planning (e.g., preparation of country programmes), to project development, to building up monitoring and reporting schemes. The GCF itself has set up a **Readiness and Preparatory Support Programme** (*Index II – 9*), which includes capacity-building measures such as institutional strengthening of national designated authorities, strategic planning (e.g., NAP development), project development or accreditation support for national entities.

- Other important funds are the **Private Financing Advisory Network** (<https://pfan.net/>) (*Index II-17*) and the **Climate Responsive Public Financial Management Framework** (*Index II-14*).
- The **Adaptation Fund Climate Innovation Accelerator** (*Index-15*) is a new \$10 million pilot small grants programme that fosters innovation in adaptation in developing countries.
- The World Bank **Forest Carbon Partnership Facility** (*Index-16*) supports efforts to reduce emissions from deforestation and forest degradation through its Readiness and Carbon Funds.

Case study on climate finance and carbon pricing from the Asia-Pacific region

Activity title: Asia-Pacific Climate Finance Fund (AClIFF)

Country / region: All ADB developing member countries are eligible to receive support from the fund.

Year of implementation: 2017

Developed under which measure / initiative: The fund was launched by ADB with support from the Federal Ministry for Economic Cooperation and Development of Germany (BMZ)

Further reading: www.adb.org/site/funds/funds/asia-pacific-climate-finance-fund; www.adb.org/projects/fund/Germany

Description of activity

The Asia-Pacific Climate Finance Fund (AClIFF) is a multi-donor trust fund established in April 2017. The objective of the fund is to support the development and implementation of financial risk management products that can help unlock capital for climate investments and improve resilience to the impact of climate change. As of September 2019, the fund had an investment volume of \$5.23 million. It supports public entities at the regional, national and subnational level with grants, concessional loans or in-kind contributions.

An emphasis of its activities lies on financial risk management products that have been proven elsewhere but are not yet widely commercially available in developing member countries of ADB. This includes financial risk management products to do the following: (1) scale up the adoption of climate technologies; (2) mobilize new sources of private sector climate financing; (3) support investment in climate-sensitive sectors; and (4) respond to extreme weather events. AClIFF targets sectors including clean energy (renewable energy, energy efficiency, clean technologies), sustainable transport, low-carbon and climate-resilient urban development and rural development, disaster risk management, agriculture and other land use.

Funding decisions are made by the Climate Change Steering Committee of AClIFF. This committee comprises the heads of the ADB operations departments, the chief economist and director general of the ADB Economic Research and Regional Cooperation Department, and its Sustainable Development and Climate Change Department, as chair. Representatives of the ADB Office of Co-financing Operations and relevant sector and thematic groups are also part of the committee.

How does the activity help to implement the Paris Agreement?

The fund supports the mobilization of additional resources of climate finance in the region and supports the de-risking of existing investment opportunities, especially with a view towards clean technologies.

Specific “acceleration success factors” of the activity

A high perception of risk is a predominant investment barrier to clean technology solutions in the developing country context. There are already investors interested in funding a certain activity in the area of clean energy or sustainable transport, but they are hindered by insecurities about the local financial market and the regulatory environment. Apart from investments in mitigation activities, AClIFF is also considerate of enhanced adaptation finance needs in the region and provides support for solutions such as index-based flood or drought crop insurance or disaster risk insurance for microfinance institutions.



An aerial photograph of a large port area. In the foreground, two large yellow gantry cranes are positioned over a dark, possibly wet, surface. To the left, a red-roofed building is visible. The middle ground is filled with rows of colorful shipping containers (red, blue, green, white) stacked in neat piles. A yellow forklift is visible among the containers. The background shows more containers and a paved area with yellow markings. Two semi-transparent red rectangular boxes are overlaid on the image, containing white text.

Industry Transition

Area 3

What industry transition means for implementing the Paris Agreement

The action area on **industry transition** addresses the transformation of carbon-intensive and heavy industries such as oil and gas, steel, cement, aluminium, aviation and shipping, and chemicals to low-carbon and cleaner production processes, with support from information technology as critical components of accelerating climate action.

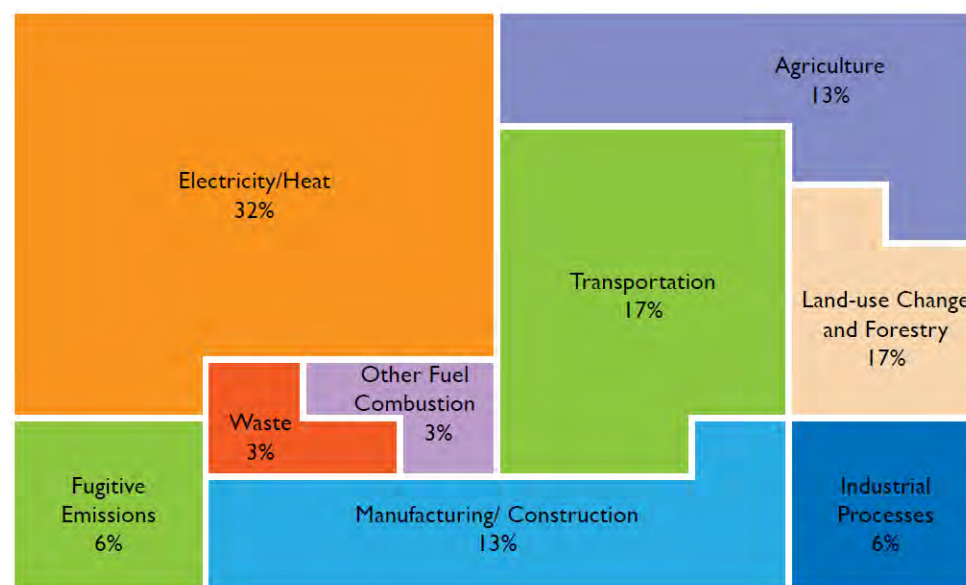
Relevance of industry transition in the context of climate change

Industrial activities represent a significant share of global GHG emissions. In 2016, the industry sector was responsible for approximately 18 per cent of total anthropogenic GHG emissions, of which 6 per cent originate in industrial processes and 13 per cent in the energy subsector manufacturing/construction. For the Asia-Pacific region, the shares of GHG emissions from industrial processes and manufacturing/construction reached approximately 8 per cent and 19 per cent respectively of total GHG emissions.⁵⁴

However, based on climate-friendly solutions available already today, there is a mitigation potential of as much as 50 per cent for the subsectors of iron and steel, cement, chemicals and paper, and a mitigation potential of 20 per cent for aluminium production. From a geographical perspective, China and India account for 44 per cent of this potential.⁵⁵ The reduction of GHG emissions can be achieved through investing in continuous efficiency gains, progressive innovations and accelerated the deployment of solutions at a larger scale. Industries that use high-emission energy sources may rely on technologies such as carbon capture and storage. Light industries such as textile manufacturing may increase their energy efficiency through fuel switch and process improvements, including innovations in the dyeing processes.⁵⁶ While mitigation seems to be the focus, when it comes to an industry transition, increasing the resilience of production processes towards the adverse impacts of climate change is also a topic that should be appropriately addressed.⁵⁷ Some parts of the industry have a high dependence on various

natural resources and raw materials, whose availability could be reduced because of severe changes in climatic conditions. Value chains are also disrupted by climate-related disasters, such as droughts, heavy rainfall or storms. The challenge for the industry sector is to address both mitigation and

Figure 8: Global GHG emissions by sector (2016)



Source: Climate Watch, Data Explorer (2020)

adaptation, while choosing measure that will not negatively affect each other (e.g., increased extraction of natural resources resulting in additional GHG emissions). Advancing sustainable resource and energy efficient industrial transition processes in the Asia-Pacific region would require measures that support both mitigation (low-carbon approaches) and careful consideration of climate change impacts and risks (including job losses and environmental damage).⁵⁸

The recently launched Industry 4.0 approach provides an excellent pathway in this regard (see figure 9).⁵⁹ Industrial processes are an important pillar of economic development in the Asia-Pacific region. When embarking on a sustainable development pathway, a green industry transition will be important to support the accelerated implementation of climate policies.⁶⁰ Specific challenges in this regard can be addressed through collaborative efforts at the regional level.

Figure 9: Industry 4.0 promises improved methods of production and business models



Source: UNIDO (2017)

References in the Paris Agreement

The Paris Agreement does not mention individual industry sectors, but indirectly implies an industrial transition towards a low-carbon development, for instance through the inclusion of individual industry sectors in the NDCs. The enhanced transparency framework of action and the financing provisions under the Agreement will also help to transition industrial activities onto climate-friendly pathways. The economic instruments under Article 6 of

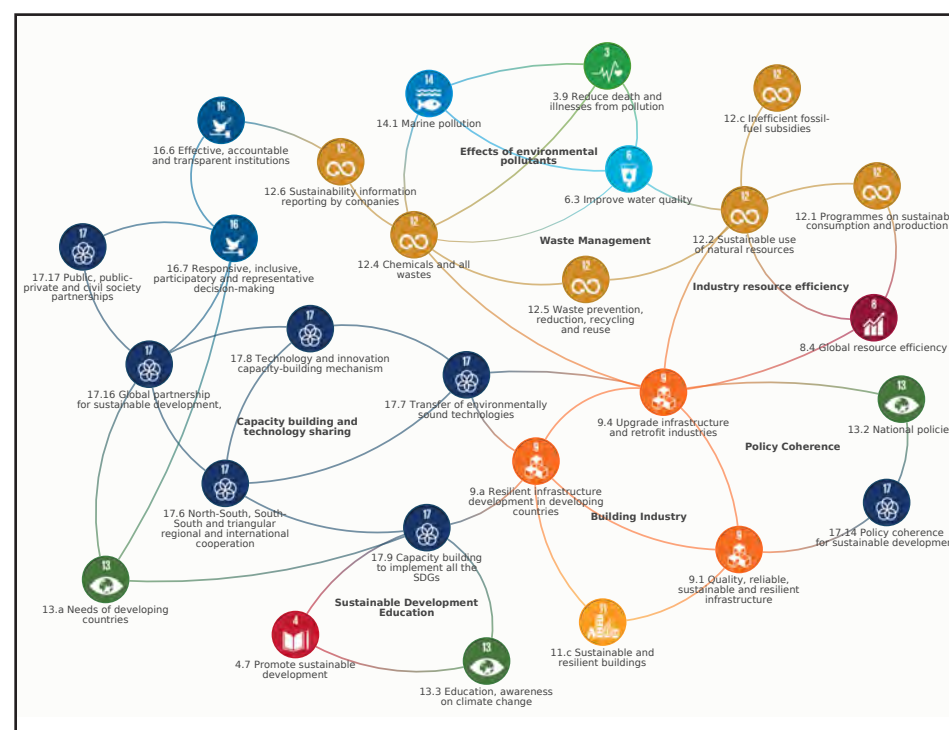
the Paris Agreement may offer further incentives for private sector actors to reduce GHG emission, once they are agreed on. While the majority of NDCs acknowledge the importance of industry in climate mitigation, most fall short of detailing activities for individual industrial sectors, and this is an opportunity for improvement in the forthcoming NDC updates.⁶¹

Linkages to SDGs

The SDGs play an important role for industry transition in the Asia-Pacific region and the rest of world. SDG 8 (decent work and economic growth), SDG 9 (industry, innovation and infrastructure), SDG 12 (sustainable consumption and production) and SDG 13 (climate action) are noteworthy in the context of the current industrial transition for climate action. The building industry offers opportunity to improve climate resilience and mitigation with retrofitting, green design, energy efficient heating and cooling as well as for carbon capture (targets 9.1, 9.a, 11.c). More generally, upgrading industrial

processes (target 9.4) would help to improve overall resource efficiency (targets 8.4, 12.1, 12.2) and reduce leakages into the environment (target 12.4). Resource efficiency also includes circular economy practices that reform waste management and also reduce pollutant leakages (target 12.5). Reducing environmental pollutants has co-benefits for both environmental and human health (targets 3.9, 6.3, 14.1). Access to finance and strengthened capacities need to be scaled up at a much faster rate, particularly for LDCs and SIDS in the Asia-Pacific region and elsewhere.⁶²

Figure 10: SDG interlinkages in the context of industry transition for climate action



Source: ESCAP analysis

Challenges to accelerate industry transition

Despite the great potential of contributing to low-carbon development in the Asia-Pacific region, which is the world's production hub,⁶³ there are considerable challenges that need to be addressed to accelerate industrial transition.

- **The need for aligning policy frameworks for a low-carbon transition:** A large proportion of existing policy frameworks in the Asia-Pacific region are still geared towards fossil fuels and carbon-intensive activities (e.g., subsidies). Coal, oil and natural gas have benefited economic development over the past century, but shifting towards a climate-friendly industry powered by renewable energy also comes with a positive outlook (e.g., efficiency gains in production, climate-proof value chains, cheaper and cleaner energy).
- **Lack of incentives and support for the industrial transition:** Countries with major industrial sectors, for example China, could accelerate the transition of the industry by setting up large-scale programmes of industrial energy efficiency to drive the uptake of the best available technologies coupled with carbon adjustments. This would work hand-in-hand with related carbon pricing and technical

assistance for an enhanced understanding of the needs and the potential of climate-friendly technologies and resilience measures.

- **The need for continuous research and development efforts:** Research and development on climate-friendly industrial transition solutions need to be stimulated and to be designed on a continuous basis to create the most suitable technological advancements for the local conditions. In addition, certain subsectors need increased attention for applicable solutions, for example, hard-to-abate sectors such as steel and cement.
- **Ensuring a just transition:** An industrial transition towards a low-carbon economy poses challenges for many traditional industrial regions, SMEs and multinational firms. The lack of economic diversification and entrenched carbon-intensive production patterns may lead to negative social and economic effects for significant shares of the work force during industrial transition, which need to be addressed with social and vocational support, including reskilling programmes.



How to accelerate industry transition for Paris Agreement implementation

Industrial activities propel growth in the Asia-Pacific region as manufacturing and construction has boomed over the past decades, however, these account for 70 per cent of the energy use in the region.⁷³ There are very important co-benefits of decarbonization of the economy with creation of jobs, improving health benefits from reduced air pollution and water pollution, and ensuring that the most disadvantaged can benefit from access to clean and modern energy. This will require stepping up action for increasing energy efficiency and decarbonization, as well as stimulating lean and clean production through comprehensive sustainable sectoral planning, shifts in taxation and investment strategies, as well as long-term innovation and enhancing the participation of SMEs, which comprise a substantial part of the industrial production value chain and labour force in the region. This section identifies opportunities and instruments for promoting a climate-friendly industrial transition and outlines relevant initiatives and available resources.

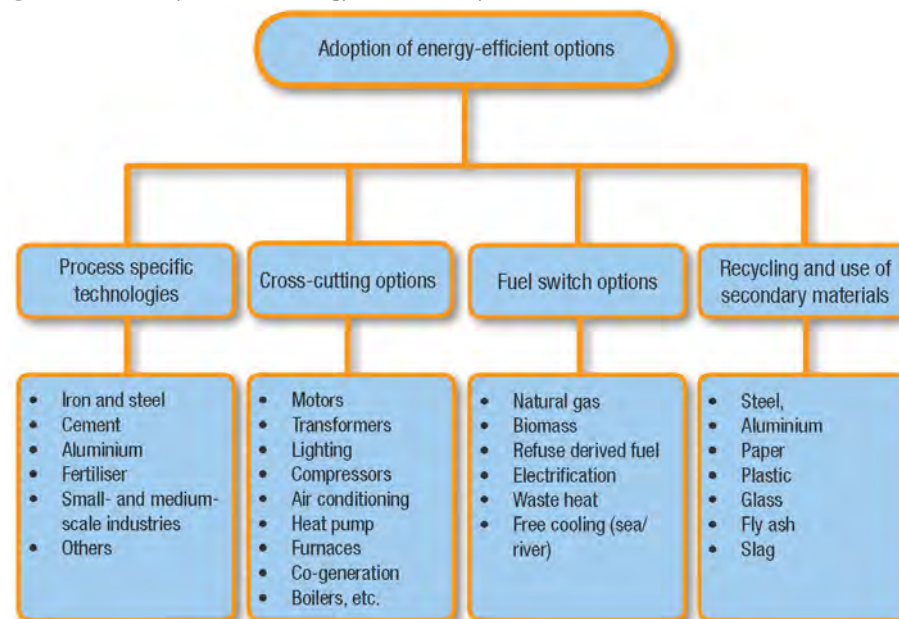
Opportunities to further industry transition

Industry transition must be at the heart of climate action in the Asia-Pacific region, and many countries are working to further transform their industrial sectors. Also, the private sector is actively engaging in greening their production and supply chains. Numerous activities underscore this development, comprising a broad range of approaches for addressing the challenges identified in the previous section to accelerate climate action.

Policy coherence and planning processes

Governments can foster a climate-friendly industrial transition by launching sectoral development plans alongside complementary support programmes. The primary target needs to be improving energy efficiency and the decarbonization of industrial processes. A categorization of energy-efficient industrial options is provided in Figure 11.⁶⁴ Furthermore, removing policies or strategies that interfere with this goal (e.g., support for fossil fuels, removing import duty on clean and renewable energy technologies, subsidies to mining industry causing deforestation) and creating policies that take care of social impacts (e.g., setting up pilot projects to develop a framework for skills development, social programmes for transitioning workforce). In the medium

Figure 11: Adoption of energy efficient options



Source: UNEP (2019d)

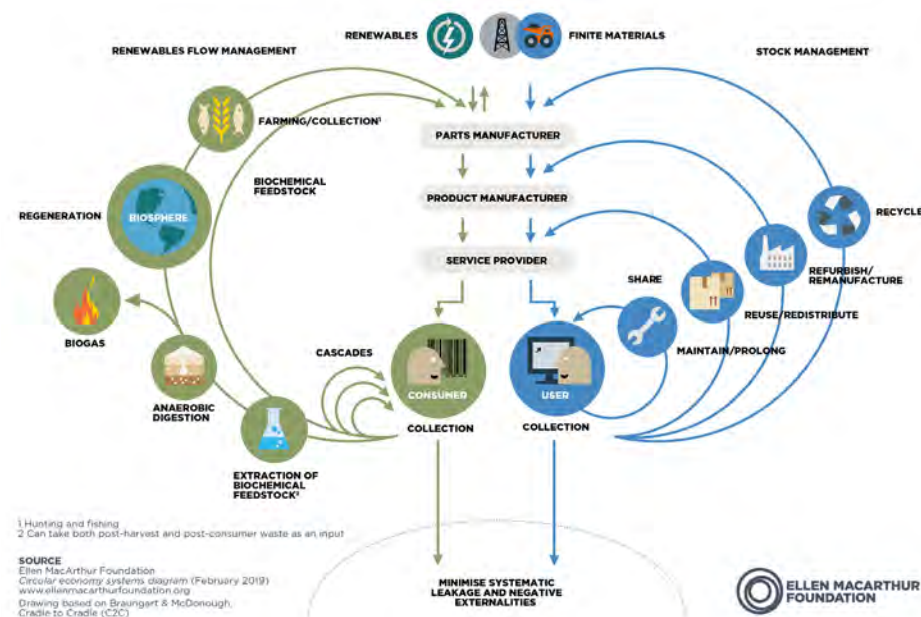
term policies promoting cleaner production will be cost effective, they will significantly reduce carbon emissions and they will create additional jobs. To raise the ambition of NDCs governments could consider the following aspirational points:

- Create national innovation platforms for green industry as partnership between the public and private sector with the objective to substantially reduce the climate impact of industries; The International Maritime Organization is taking the lead to reduce maritime shipping emissions by switching fuels and use of renewable energy.
- Develop green industrial development policies and sectoral implementation plans for key economic sectors, with active engagement of the private sector.
- Put in place stronger incentives to deploy renewables at scale in countries with capabilities in low-carbon technologies, thus stimulating competitiveness and greater export success. For example, China is specializing in exporting solar photovoltaics and has achieved a comparative advantage of 2.7 in solar photovoltaics.⁶⁵ Incentives and support for the manufacturing sector and SMEs to adopt circular economy approaches are described in Figure 12.⁶⁶

» Measures supporting policy coherence and planning processes

- Creating **industry specific road maps** for removing trade and policy barriers to the transition to low-carbon technologies within the sector and identifying support needs. This should occur in partnership with industry to ensure awareness about the importance of ambitious climate action, while at the same time taking into consideration specific circumstances of production.
- Reflecting the industrial sectors within **national adaptation strategies**, as severe weather events and the depletion of natural resources also impact the business model of stakeholders within this sector.
- Incentivising industry sector actors by introducing and enforcing guiding **regulations** such as energy efficiency standards, the polluter-pays principle and policies for transport in maritime shipping and aviation. Carbon pricing instruments will also foster the transformation

Figure 12: Circular Economy



Source: Ellen MacArthur Foundation

of existing production patterns.

- Ensuring a **just transition** by accompanying the promotion of the green economy with policies that account for impacts of the paradigm shift by creating sufficient employment opportunities, skills-development programmes and accounting for training needs, reallocation of workers, decent work opportunities, offering local solutions and supporting displaced workers.
- Make **post-COVID bailout packages** conditional on alignment with reducing emissions in compliance with the Paris Agreement.

» Relevant initiatives supporting policy coherence and planning processes

- At the Climate Action Summit in 2019, the **Leadership Group for Industry Transition** (Index III – I) was launched to direct the world's heaviest GHG emitting industries towards a low-carbon economy.

Members of the Group include countries (e.g., India, Republic of Korea) as well as companies (e.g., Dalmia Cement, Mahindra Group, ThyssenKrupp).

- The **Getting to Zero Coalition** (*Index III – 2*) is a partnership between the World Economic Forum, Global Maritime Forum and Friends of Ocean Action. It builds on the call for action to support decarbonization, launched in October 2018 and signed by more than 70 leading representatives of the maritime industry, financial institutions and other stakeholders, as well as on the Poseidon Principles, a global framework for climate-aligned ship financing.
- Ten large companies in the energy and industrial sectors, including the world's largest developers of renewable energies, are committed to ensuring that new jobs in low-emission sectors are fair, decent and inclusive. They made a **Just Transition and Decent Jobs Pledge** (*Index III – 3*), a commitment to comply with certain standards regarding their own employees (e.g., social dialogue with workers, wage guarantees) and to only use contractors who also comply with the standards.
- The science-based targets initiative support companies to define how much and how quickly they need to reduce their greenhouse gas (GHG) emissions to prevent the worst effects of climate change.⁶⁷
- RE100 is a global initiative bringing together the world's most influential businesses committed to 100 per cent renewable electricity. Led by the Climate Group and in partnership with CDP, its mission is to accelerate change towards zero carbon grids at scale. It has a number of members from the Asia-Pacific region.⁶⁸
- EPI100 brings together a growing group of energy-smart companies improving their energy productivity to lower their emissions and improve their competitiveness. EPI100 is led by the Climate Group in partnership with the Alliance to Save Energy. Its mission is to lower global energy demand and accelerate the clean energy transition. The International Energy Agency estimates that over 40 per cent of the emissions cuts needed to reach global climate goals can be achieved through energy efficiency. In making smarter use of energy, EPI100 members are leading the way.⁶⁹

Finance and regulatory frameworks

Financial incentives and disincentives play an important role in facilitating an industrial transition towards low-carbon solutions. The steel and cement industries, in particular, may look into opportunities for carbon capture investment that will reduce the need for extended investments.⁷⁰ Therefore, policy signals need to be aligned with respective support schemes and investors should acknowledge the importance of a change in production processes or the implementation of resilience measures. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Gradually shift corporate taxation to pollution-, energy- and resource-intensity and not profits;
- De-risk emerging technologies that face barriers of high upfront costs and would otherwise be delayed entering the market, through long term investment; and
- Incentivise investments in resource efficiency improvements throughout the supply chain to minimize emissions along the whole system, through disclosure reporting.

» Supportive measures for finance

Dedicated financial support instruments exist to assist developing countries in accessing required funding.

- **Enabling access to finance** through provision of innovative financing mechanisms and mobilization of capital from the private sector.
- The **financial mechanism of UNFCCC** offers financial instruments for multiple purposes related to climate action.
- Further **multilateral climate finance** vehicles are also supporting projects and programmes in the area of a climate-friendly energy transition. These include MDBs (e.g., World Bank, ADB) as well as climate funds (e.g., CIF).
- In terms of **domestic finance**, national climate funds could be used to support the industry transition. In case carbon pricing mechanism are established (e.g., sectoral emissions trading schemes or carbon tax), the revenues generated could also be fed back into the sector by subsidizing the introduction of low-carbon and climate-resilient technologies.

» Relevant initiatives for finance

- The **Clean Air Initiative** (*Index III – 4*) aims at mitigating climate change, reducing air pollution and promoting health in a comprehensive manner. The initiative will provide an opportunity for new commitments and investments in interventions for climate-resistant health systems and in air quality monitoring and policy implementation.
- **Climate Action 100+** (*Index III – 7*) is a five-year initiative led by investors to involve systemically important greenhouse gas emitters and other companies across the global economy that have significant opportunities to drive the clean energy transition and to help achieve the Paris Agreement goals. Together, they manage over \$35 trillion in assets. Investors are calling on companies to improve governance on climate change, curb emissions and strengthen climate-related financial disclosures.
- **We Mean Business coalition** (*Index III – 9*) is a prominent example of a coalition of interest groups that targets private companies to take action against climate change and achieve net zero carbon dioxide emissions, and it encourages governments to adopt environmental policies. So far, over 1,000 of the world's most influential businesses and investors representing almost \$25 trillion in market capitalization have joined the coalition. They see lucrative business opportunities in the measures proposed in the Paris Agreement and intend to build an effective platform for sustained ambition and innovation.
- The **Private Financing Advisory Network (PFAN)** (*see Index II-17*) is a global network of climate and clean energy financing experts, which offers free business coaching and investment facilitation to entrepreneurs developing climate and clean energy projects in emerging markets. It also connects investors to high-potential climate and clean energy projects in emerging markets. Initiated by UNFCCC and the Climate Technology Initiative in 2006, PFAN is hosted jointly by the United Nations Industrial Development Organization (UNIDO) and REEEP.

Capacity

Industry stakeholders as well as representatives of the public and private sectors who are involved in an industrial transition might not yet be equipped with the required knowledge and skills to plan for sector-specific low-carbon pathways or resilience strategies. This capacity gap needs to be addressed with dedicated trainings and best-practice exchanges. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Establish national “green industry” academies;
- Integrate training to identify opportunities for industrial symbiosis and circular economy practices;
- Support research and development programmes to drive clean, innovative solutions; and
- Facilitate collaboration and private/academic collaboration in key hard-to-abate sectors, both nationally and internationally.

» Supportive measures for capacity

Dedicated capacity-building support on mobilizing climate finance or designing financial products can help to overcome and alleviate challenges.

- **Industry or subsector-specific networks** can facilitate the exchange on the latest technologies and strategies for a climate-friendly transition. These can take place on a global scale or at the regional or local level, and include representatives from both public and private institutions.
- Bilateral and multilateral development agencies are also actively supporting countries in building up the required capacities through the provision of information and setting up of **dedicated training programmes on designing sectoral road maps or accessing financial resources**.

» Relevant initiatives for capacity

- The **Nitric Acid Climate Action Group (NACAG)** (*Index III – 5*) has the objective to assure global abatement of N₂O emissions from nitric acid production. Its vision is to incentivise the installation of appropriate abatement technologies in all nitric acid production plants worldwide. The initiative provides all governments and plant operators

with guidance and information on technological and regulatory issues regarding N₂O abatement. Moreover, it makes available financial support for the installation and operation of abatement technology.

- The **Low Carbon Technology Partnerships initiative (LCTPi)** (*Index III – 8*) consists of over 160 companies and 70 partners committed to accelerating the transition to a low-carbon economy. LCTPi is led by the World Business Council for Sustainable Development, and it is supported by We Mean Business partners. It provides businesses and policymakers with a collaborative platforms to scale the delivery of business solutions to levels and speeds that are compatible with limiting global warming to 2°C.
- **Business Ambition for 1.5°C** (*Index III – 6*) is an urgent call to action, led by a global coalition of United Nations agencies, business and industry leaders. Companies are encouraged to commit to ambitious emissions reduction targets as part of the science-based targets initiative. By setting a scientifically sound goal in line with the 1.5°C target, companies can make their critical and necessary contribution to limiting the worst effects of climate change. To date, 208 companies with a market capitalization of over \$3.6 trillion have replied to the open letter and decalred their business ambition for 1.5°C.
- **Global Cleantech Innovation Programme** of UNIDO promotes innovation in clean technologies through a cross-sectoral and multistakeholder approach to build sustainable innovation ecosystems for small and medium-scale enterprises and startups. The Programme stimulates innovation, entrepreneurship and the global SME innovation value chain.⁷¹
- **Climate-KIC Accelerator** is a European knowledge and innovation community working to accelerate the transition to a zero-carbon economy.⁷²

Case study on industry transition from the Asia-Pacific region

Activity title: Nitric Acid Climate Action Group (NACAG)

Year of implementation: 2015–present

Country / region: Global

Further reading: www.nitricacidaction.org

Description of activity

The Nitric Acid Climate Action Group (NACAG) was launched by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety of Germany (BMU) at COP 21 in Paris. The NACAG initiative aims for global abatement of N₂O emissions from nitric acid production. Its vision is to incentivise the installation of appropriate abatement technologies in all nitric acid production plants worldwide.

The NACAG initiative offers financial and technical support to individual nitric acid plant operators. While technical support is available to all governments and nitric acid producers worldwide, the financial support is bound to the condition that the government of the country in which the plant is located commits to sustaining the emission abatement from year 2024 onwards.

Two different financing mechanisms are available: In Stream I, NACAG provides nitric acid plant operators grant funding to reimburse investment, maintenance and monitoring costs for abatement technology. In Stream II, NACAG offers to purchase emissions reductions from N₂O abatement projects at prices determined by specifically designed auctions.

The initiative provides all governments and plant operators with guidance and information on technological and regulatory issues regarding N₂O abatement. Financial support for the installation and operation of abatement technology is subject to the condition that partner countries take full responsibility for mitigation activities after 2023, that is, that they make the commitment to take actions in their NDCs.

How does the activity help to implement the Paris Agreement?

The global nitric acid sector has an estimated annual emission reduction potential of 167 metric tons CO₂e. The NACAG programme is equipped with financial resources to directly enable the reduction of 20 metric tons CO₂e. Governments, plant operators, further international donors as well as other stakeholders are welcome to join this global action group and, in so doing, to contribute to the worldwide transformation of the nitric acid sector. The objective is for all countries to include the abatement of nitrous oxide emissions in their NDCs and put in place effective mechanisms to ensure long-term emission abatement.

Specific “acceleration success factors” of the activity

The political commitment by partner countries of the NACAG to take abatement actions of N₂O into their own hands ensures the sustainability of the initiated activities and the long-term transformation of the sector.

The NACAG Secretariat is advising governments on policy and legislative options for sustainable climate change mitigation in the nitric acid sector, comprising the analysis of abatement costs and implications for the sector as well as consultancy on sustainable financing options for abatement post-2023.





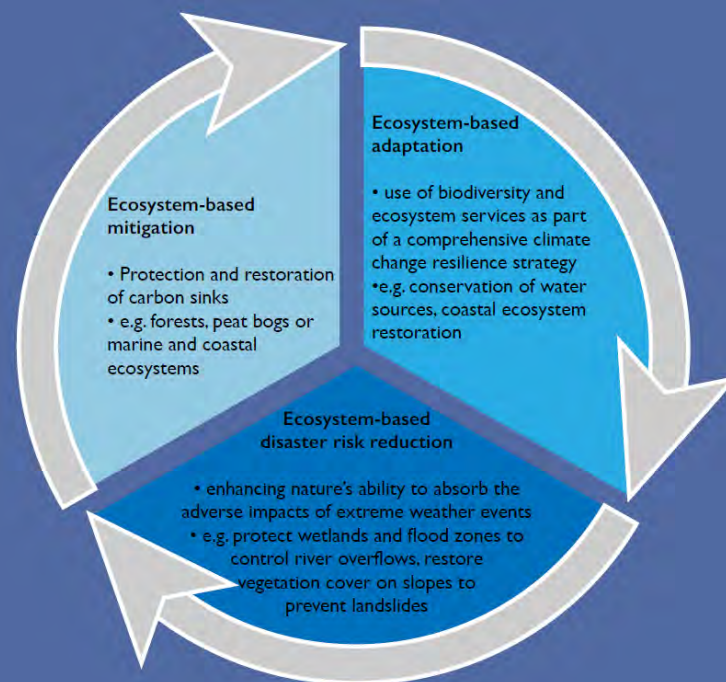
Nature-based Solutions

Area 4

What nature-based solutions mean for implementing the Paris Agreement

The action area on **nature-based solutions** addresses most prominently, reducing emissions from deforestation and forest degradation (through the REDD+ initiative) and conservation, sustainable management and restoration of natural or modified ecosystems to face the most pressing human challenges (e.g., climate change, water and food security, disasters generated by natural events). According to their climate regulatory function, nature-based solutions can be clustered in three functional categories: ecosystem-based mitigation, ecosystem-based adaptation and ecosystem-based disaster risk reduction.⁷⁴

Figure 13: Nature-based solutions for climate action



Source: IUCN

In the Asia-Pacific region, all three functions of nature-based solutions are important for the reduction of GHG emission by enhancing carbon sinks and strengthening resilience within and across forestry, agriculture, oceans and food systems through biodiversity conservation, the protection of wetlands and mangroves and leveraged supply chains and technology.⁷⁵

Relevance of nature-based solutions in the context of climate change

Nature-based solutions 'protect, sustainably manage and restore natural or modified ecosystems [and] address societal challenges (climate change, food and water security, or natural disasters) effectively and adaptively, simultaneously providing human wellbeing and biodiversity benefits'.⁷⁶ As such nature-based solutions are recognized as an effective, globally scalable approach for long-term and cost-efficient climate regulation for both mitigation and adaptation purposes. According to estimates by the United Nations, these solutions have the potential to remove up to 12 gigatons CO₂e per year and boost climate resilience in multiple sectors and regions, while adding an additional \$2.3 trillion in productive growth to the global economy.⁷⁷ Among these solutions, actions to reduce emissions from deforestation and forest degradation and increase carbon sequestration via forest expansion are among the most impactful and cost effective. Protection and restoration of terrestrial ecosystem through the reduction of deforestation and restoration of degraded land by commitments under the United Nations Convention to Combat Desertification in line with the United Nations Decade on Ecosystem Restoration will mitigate emissions by sequestering carbon and will provide continuity in the commodity supply chain. Restoration of marine ecosystems of mangrove, coral and seagrass habitats will improve carbon sequestration by promoting blue carbon, and it will enhance climate change adaptation for fisheries and provide effective coastal disaster risk management. Furthermore, the agricultural sector offers options for reducing carbon emissions from crops and food waste by promoting productive and sustainable food systems and by increasing capture and sequestration in soils.⁷⁸ The International Union for Conservation of Nature (IUCN) recently called for the introduction of standards for global nature-based solutions to inform the planning, design and implementation of associated actions, which is now expected to be launched at the IUCN World Conservation Congress in 2021 with the new dates to be further announced.⁷⁹

Protecting and enhancing terrestrial and marine ecosystems also provides important benefits in relation to climate adaptation, securing the flow of

ecosystem services that underpin economic activity in key sectors (such as hydropower production, tourism and agriculture), water production and disaster risk mitigation. These actions also secure rural livelihoods and provide important benefits in terms of health support, avoiding zoonosis. For instance, the air purification and temperature regulating services of Beijing's forest ecosystems are estimated to save China \$1.2 billion annually as they mitigate air pollution and generate electricity savings.⁸⁰ In Asia and the Pacific, which is the most prone to natural and climate induced disasters of all world regions, nature-based solutions have a crucial role to play for climate adaptation purposes,⁸¹ including to reduce the negative impact of monoculture farming/plantations. In addition, unplanned urban expansion has encroached on marine and coastal ecosystems, which reduces their adaptive ecosystems function and results in significant increases in the impacts of disasters. Therefore, ecosystems-based adaptation solutions have already received widespread attention in the region. For example, in the Philippines, mangroves mitigate the impact of flooding for more than half a million people per year. In terms of GHG mitigation, nature-based solutions have also been applied in other countries in the region. Nature-based solutions are especially relevant for SIDS. Agroecology is being also applied in Asia-Pacific countries, including Cambodia, India, Indonesia, the Philippines and Viet Nam as a nature-based solution to both climate change and food security.⁸²

Figure 14: Nature-based solutions as per the IUCN definition



Source: IUCN (2019)

References in the Paris Agreement

Although the Paris Agreement does not explicitly mention nature-based solutions, relevant references to nature-based solutions climate actions are available in the sections related to mitigation (Article 5) and adaptation (Article 9). Records from the Paris Agreement negotiations under UNFCCC contain extensive references to the contributions to GHG emissions reduction from nature-based solutions, including measures in land use, land use change and forestry and incentives, including results-based payment for reducing emissions from deforestation and forest degradation in developing countries, and results-based payment. The Paris Agreement highlights that adaptation measures shall be intended to protect people, livelihoods and ecosystems, which can be met with nature-based solutions for the protection, restoration

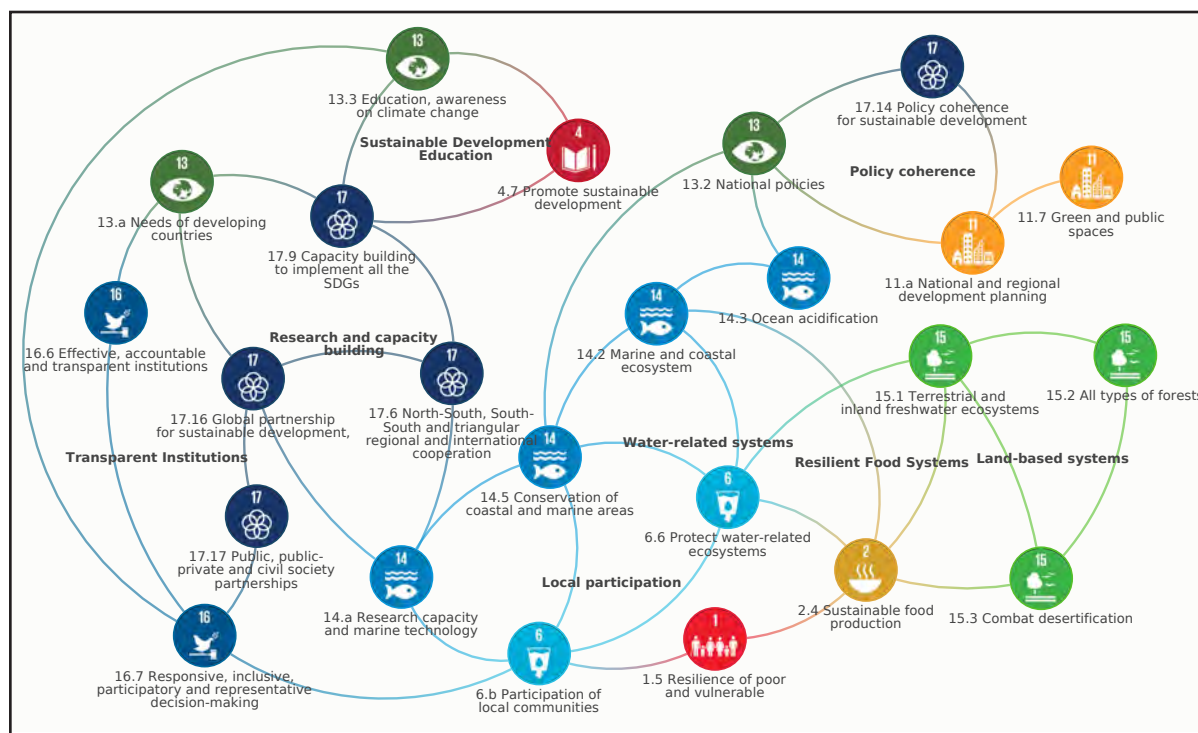
and sustainable management of ecosystems. In addition, the NDCs provide an opportunity to include a wide variety of measures, including nature-based solutions for mitigation and adaptation. The Paris Agreement has also indirectly listed nature-based solutions as mitigation and adaptation measures to be detailed in the NDCs as per Articles 4, 7, 9, 10, 11 and 13 with the view to achieving the purpose of the Agreement as set out in Article 2. However, the reporting requirements are not explicitly defined.

Linkages to SDGs

Nature-based solutions have multifaceted applications for achieving multiple SDGs. For example, SDG 1 (no poverty) highlights strengthening the resilience of vulnerable groups to natural hazards and the creation of new jobs. SDG 11 (sustainable cities and communities) calls for providing and implementing green infrastructure. SDG 13 (climate action) can be linked to both mitigation and the adaptation of nature-based solutions. SDG 14 (life below water) underlines the importance of marine ecosystems, along with SDG 6 (clean water and sanitation) and SDG 15 (life on land) of terrestrial and water ecosystems.

Using nature-based solutions for climate action occurs through water-related systems (targets 14.2, 14.5, 6.6, 15.1) and land-based systems (targets 15.1, 15.2, 15.3). For example, carbon sinks, such as landed forests or marine mangroves, work to mitigate existing carbon emissions. Human food systems intersect with both systems and play a strong role in resource management (target 2.4). Local participation and engagement is also key to protect naturally resilient systems, the residents themselves and the wider community while also gleaning traditional knowledge that may provide insight into the management of local resources (targets 6.b, 14.5, 14.a).

Figure 15: SDG interlinkages in the context of nature-based solutions for climate action



Source: ESCAP analysis

Challenges to accelerating nature-based solutions

To increase the recognition of the enormous potential of nature-based solutions for climate change mitigation and adaptation there is need to enhance international and regional cooperation. The discussions related to implementation of the Paris Agreement, as well as a growing collection of best practice in the application of nature-based solutions will also facilitate enhancing their recognition. The most prevalent challenges that nature-based solutions are facing are given below.⁸³

resources, agriculture, forest conservation), which will facilitate planning, awareness raising and capacity-building.

- **Lack of a defined standard of what constitutes nature-based solutions:** IUCN has advocated for the importance and application of nature-based solutions and is promoting internationally recognized standards. Discussions on that continue in preparation for the IUCN World Conservation Congress to be held in 2021.
- **Lack of recognition of the importance of nature-based solutions in national planning or international support instruments:** This is a consequence of the lack of an agreed standard for nature-based solutions at the international level.
- **Insufficient recognition of nature-based solutions in NDCs,⁸⁴** with higher emphasis in developing countries than developed countries. NDCs rarely include measurable nature-based solutions targets against which progress can be tracked. Nature-based solutions in non-forest ecosystems are not well represented. The adaptation benefits of mitigation actions (and vice versa) are rarely taken into account, and there are often mismatches between vulnerabilities and actions/targets for adaptation. Most nature-based solutions actions are planned, rather than implemented, and they are conditional on financial support.
- **Lack of a single authority that can handle multisectoral aspects of nature-based solutions at the national level.** Because of the diversity of the ecosystem to be addressed there is a need to establish a coordinating authority at the national level to monitor and facilitate applications of nature-based solutions in multiple sectors (e.g., water



How to accelerate nature-based solutions for Paris Agreement implementation

Nature-based solutions have been historically undervalued and must be given proper recognition for the contributions they give to communities. To stimulate the growth of nature-based solutions a comprehensive stocktake of the current picture is required to identify opportunities. This section provides an overview of the opportunities and instruments for enhancing the use of nature-based solutions, and relevant initiatives and further resources.

Opportunities to boost nature-based solutions

To align with the Paris Agreement, related nature-based solutions for mitigation and adaptation need to be outlined in the NDCs. Climate action programme implementation proves that pursuing nature-based solutions from the three functional categories (see Figure 13) at the same time brings economies of scale and results in cross-cutting benefits, combining low-carbon impacts and strengthening climate action.⁸⁵ A number of approaches are recommended below to accelerate the application of nature-based solutions, which will directly benefit implementation of the Paris Agreement.

Policy coherence and planning processes

Nature-based solutions can have multiple climate action benefits, with significant mitigation, risk mitigation and adaptation impact. Adequate policies and strategies should mainstream nature-based solutions across climate action, as well as related fields of action, such as conservation. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Comprehensive stocktaking exercise of available natural capital and ecosystem services to identify gaps and opportunities; and
- Project guidelines for ecosystem restoration targets.

» Measures supporting policy coherence and planning processes

- **Mainstreaming nature-based solutions** in the preparation of NDC

implementation plans and road maps and development of NAPs and across climate action and nature conservation related policies. The University of Oxford has set up a policy database, showcasing how nature-based solutions are being applied globally with a focus on adaptation.⁸⁶

- **National standards for nature-based solutions** can be developed by leading countries, while waiting for the global IUCN agreement. Such work can include developing common standards to ensure that nature-based solutions have measurable and tangible results with certain quality indicators. These can contribute to the work of IUCN on global standards, which will provide guidance not only to governments, but to businesses, investors, communities and non-governmental organizations (NGOs).

» Relevant initiatives supporting policy coherence and planning processes

- The **United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation (UN-REDD Programme)** (*Index IV – 1*) is a collaborative programme of the Food and Agriculture Organization of the United Nations (FAO), UNDP and UNEP, created in 2008, which supports nationally led REDD+ processes and respective stakeholder involvement.

- Launched at the Climate Action Summit in September 2019, **A Just Rural Transition (JRT)** (*Index IV – 4*) brings together governments, companies, civil society, farmers groups and indigenous people to support a growing global ‘community of purpose’. It focuses on strengthening the resilience of people’s livelihoods, especially of small-scale food producers.
- The global **Campaign for Nature** (*Index IV – 6*) is a coalition of scientists, government leaders, NGOs and businesses under the lead of the Secretariat of the Convention on Biological Diversity, closely collaborating with UNEP. The coalition contributes to the Paris Agreement goals by committing to conserve 30 per cent of the Earth’s land and oceans by 2030 through nature-based solutions.

Finance and regulatory frameworks

International support mechanisms need to explicitly highlight nature-based solutions within their funding priorities for climate action, as these are often more effective and economically efficient solution with recommendations for inclusion in national planning of beneficiary countries. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Leverage existing financing and stimulus packages by applying them to nature-based solutions;
- Invest in “green” public works programmes to restore or improve environments that also provide local employment; and
- Eliminate funding/investment for/in projects that cause widespread deforestation or other environmental harm.

» Supportive measures for finance

Dedicated financial support instruments exist to assist developing countries in accessing required funding.

- The **financial mechanism of UNFCCC** offers financial instruments for multiple purposes related to climate action.
- Further **multilateral climate financial instruments** are also supporting projects and programmes in the area of nature-based solutions for mitigation or adaptation. These include MDBs (e.g., World

Bank, ADB) and climate funds (e.g., CIF).

- There are opportunities to support nature-based solutions for climate action from national climate funds as well as private investment.

» Relevant initiatives for finance

- The **Natural Climate Solutions Alliance** (*Index IV – 6*) seeks to mobilize the resources needed for nature-based solutions to contribute fully to the delivery of the Paris Agreement and SDGs. The resources would be used to tackle the most pressing environmental and social challenges, biodiversity and forest loss, sustainable water management and sustainable community livelihoods. The initiative to establish this alliance is being advanced by businesses and NGOs.
- The 14 members of the **High-Level Panel for a Sustainable Ocean Economy** (*Index IV – 8*) are Australia, Canada, Chile, Fiji, Ghana, Indonesia, Jamaica, Japan, Kenya, Mexico, Namibia, Norway, Portugal and Palau, representing approximately 30 per cent of the world’s coastlines, 30 per cent of the world’s exclusive economic zones, 20 per cent of the world’s ocean catch, and 20 per cent of the world’s shipping fleet. Members committed to invest in nature-based solutions by restoring, protecting and managing coastal and marine ecosystems and by harnessing ocean-based renewable energy by scaling up offshore and ocean-based renewable energy.
- The **Resilient Asian Deltas (RAD) Initiative** (*Index IV – 9*), launched by the World Wide Fund for Nature, seeks to stop the sinking and shrinking of the six largest delta systems in Asia, the Ganges Meghna-Brahmaputra, Indus, Irrawaddy, Mekong, Pearl and Yangtze. The initiative has been designed to reduce barriers, respond to opportunities and scale up solutions that will transform attitudes and approaches to defending deltas through political and financial investments.

Capacity

Increased awareness of the multiple benefits of nature-based solutions paired with connections to different stakeholders will enable the design of new projects for nature-based solutions, which can also be of a cross-

sectoral nature. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Expand stakeholder engagement to incorporate indigenous knowledge and insights into local solutions;
- Build awareness and acceptance for nature-based solutions as alternatives in public procurement; and
- Improve communication to the general public of the everyday, necessary benefits that nature provides.

» Supportive measures for capacity

Dedicated capacity-building support on mobilizing climate finance or designing financial products can help to overcome and alleviate challenges.

- **Specific networks for nature-based solutions** can facilitate the exchange on standards or successful approaches to nature-based solutions. These can take place on a global scale or on regional or local levels and include representatives from both public and private institutions as well as from civil society.
- Bilateral and multilateral development agencies are also actively promoting nature-based solutions by building up required capacities by providing information and setting up dedicated **training programmes**.

» Relevant initiatives for capacity

- **Accelerating action within the food system** (*Index IV – 2*) is led by New Zealand, the Global Research Alliance on Agricultural Greenhouse Gases and its partners. It seeks to strengthen the ability of countries to monitor agricultural GHG so that they can accelerate the development of mitigation strategies, improve transparency, gain greater access to climate finance and improve climate benefits resulting from development and other investments.
- The **Group of Friends for Nature-based Solutions (GOF4NBS)** (*Index IV – 3*) was proposed by the Nature-Based Solutions for Climate Manifesto and established following the 2019 Climate Action Summit. It will facilitate cooperation among governments and non-State actors in order to foster growth in the application of nature-based solutions.

- Under the lead of the University of Colorado Boulder, 38 states and provinces across Latin America, the Caribbean, South-East Asia and West Africa are collaborating on a subnational level to protect tropical forests, reduce emissions from deforestation and forest degradation and promote realistic pathways for rural development that maintains forests. The so-called **Governors' Climate and Forests Task Force** (*Index IV – 7*) wants to empower a coalition of subnational jurisdictions, their civil society, as well as private sector partners to implement innovative jurisdiction-wide programmes for sustainable low emissions development built upon improved forest governance and novel technical and financial mechanisms.
- **Remove Commodity-driven Deforestation** (*Index IV – 10*) which started in 2015, seeks to facilitate commitments from companies to remove commodity-driven deforestation from their supply chains. This will significantly reduce emissions and will improve the sustainability and resilience of their supply chains.

Case Study on nature-based solutions from the Asia-Pacific region

Activity title: Emission Reductions Program

Country / region: Viet Nam

Year of implementation: Launched in October 2020, in progress

Developed under which measure/initiative: World Bank, Forest Carbon Partnership Facility (FCPF)

Further reading: See www.worldbank.org/en/news/press-release/2020/10/22/vietnam-signs-landmark-deal-with-world-bank-to-cut-carbon-emissions-and-reduce-deforestation

Description of activity

The Emission Reductions Program in Viet Nam is designed to address the underlying causes of forest loss in the country's North Central Region and by so doing reducing emissions from deforestation and forest degradation. The Program also supports forest restoration. The region was chosen for its critical biodiversity importance and socioeconomic status. The Program area covers 5.1 million hectares of land (16 per cent of the land area of the country), of which 3.1 million hectares are currently forested, and it includes five internationally recognized conservation corridors. It is home to approximately 10.5 million people, nearly one third of whom live below the national poverty line. The Program follows a preparation phase that built readiness to engage in an emission reduction payment agreement and is a step towards full implementation of forest carbon services in Viet Nam.

How does the activity help to implement the Paris Agreement?

The Program supports reforestation and amelioration of degraded forests, intertwining climate action in the mitigation (Article 5) and adaptation (Article 7) components of the Paris Agreement.

Specific “acceleration success factors” of the activity

Viet Nam is the first country in Asia-Pacific region and the fifth globally to reach such a milestone agreement with the FCPF. Emission reduction purchase agreements are innovative instruments that incentivise sustainable land management at scale and help to connect countries with other sources of climate financing. The resources from the FCPF provide new opportunities to conserve and regenerate forest landscapes and biodiversity while simultaneously supporting sustainable economic growth, which is critical for Viet Nam's development going forward.



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Cities and Local Action



Area 5



What cities and local action mean for implementing the Paris Agreement

The action area on **cities and local action** focuses on advancing mitigation and resilience at the urban and local levels with new commitments for reducing emissions from urban buildings, transportation and infrastructure and for building the adaptive capacities of the urban poor who often live in vulnerable informal settlements. In addition, it underlines the importance of multi-level climate action by designing the most appropriate solutions for local conditions.

Relevance of cities and local action in the context of climate change

Asia and the Pacific became a predominantly urban region in 2019,⁸⁷ with many of the world's fastest growing intermediary cities, 80 per cent of the region's gross domestic product,⁸⁸ enormous energy demand and emissions. The region's cities are also home to large informal populations, vulnerable to climate shocks and stresses. At the same time, urban areas and agglomerates account for approximately 70 per cent of global energy use and related CO₂ emissions⁸⁹ and there are 2.3 billion city residents in Asia and the Pacific (accounting for more than 54 per cent of global urban populations). Buildings, transportation, waste management, industrial process and energy production within urban settlements are the main sectors from which urban GHG emissions originate.⁹⁰ Hence, cities and local actions are key to securing our climate future and successfully implementing national climate mitigation plans, including NDCs.

Energy use in buildings for temperature regulation and hot water supply is significant and is estimated to amount to one third of global energy consumption. New buildings and retrofitting buildings represent a huge energy saving potential, which can be leveraged with available and demonstrated technologies, such as energy efficiency measures (e.g., thermal insulation, smart use etc.) and a shift to low-carbon energy supply (e.g., renewable energies, district heating, etc.). Green rooftops and other urban green spaces

provide cooling and an opportunity to grow food to improve the climate and food resilience of urban settlements.⁹¹

GHG emissions patterns of cities and related potential mitigation action are influenced by different driving forces such as physical, economic and social factors, and the level of urbanization and development. All this varies from city to city. A low-emissions pathway will require building emissions to be reduced by 80–90 per cent by 2050, new construction to be fossil-fuel-free and near-zero energy by 2020, and an increased rate of refurbishment of existing buildings to improve energy efficiency.⁹² In addition, sustainable transportation modes need to be introduced to respond to the increasing demand for urban mobility. Cities in the region generate about 1.21 million tons of municipal solid waste a day, which is a major source of methane emissions, and by 2025 it is estimated to more than double to 2.65 million tons per day.⁹³

On the other hand, effects of the climate change can be severely felt in cities, particularly among the most vulnerable populations suffering from heat stress, terrestrial and coastal flooding, new disease vectors, air pollution and water scarcity.⁹⁴ The Future of Asian and Pacific Cities 2019 report, by ESCAP and the United Nations Human Settlements Programme (UN-Habitat), identifies



four thematic priority areas and 15 policy pathways for achieving sustainable, resilient and inclusive climate-smart cities, and if those pathways are followed, they can contribute to achieving net-zero urban emissions by 2050.⁹⁵ Rapidly expanding secondary cities in the region have the opportunity to benefit

from such a transformational pathways. Strengthened local governance and recent price changes in renewable energy technologies will help to leverage the great potential for emissions reductions in urban energy generation and energy efficiency (e.g., buildings), transport and waste management.

References in the Paris Agreement

Involving subnational governments in setting NDCs and NAP targets and goals is widely recognized as critical to raising – and achieving – country-level ambitions under the Paris Agreement. By incorporating subnational government actions or their capacity to act, national governments may also discover untapped opportunities to reduce emissions, in particular on demand-side management, and opportunities for climate-proofing in COVID-19 recovery plans. Disaggregated national analysis and target setting can help countries to raise their ambition in line with the Paris Agreement.

Cities and local action are important to achieve commitments to the Paris Agreement and the required decarbonization of the energy system, and to address critical environmental issues such as air pollution and waste

management. Reducing energy demand and increasing energy efficiency is a precondition and can only be reached if cities make their contributions. Hence, any solution for the climate and energy transition must consider the urban context, by addressing urban heating and cooling demand, electricity consumption and production, and urban waste management.⁹⁶

Achieving NDCs and NAPs requires technical competency, knowledge and skills within city governments to establish, monitor and enforce local measures. These skills may need to be developed or enhanced for better implementation, participation, and follow-up capacity. Experienced national, regional or city governments can share knowledge and cooperate to help build local capacity.

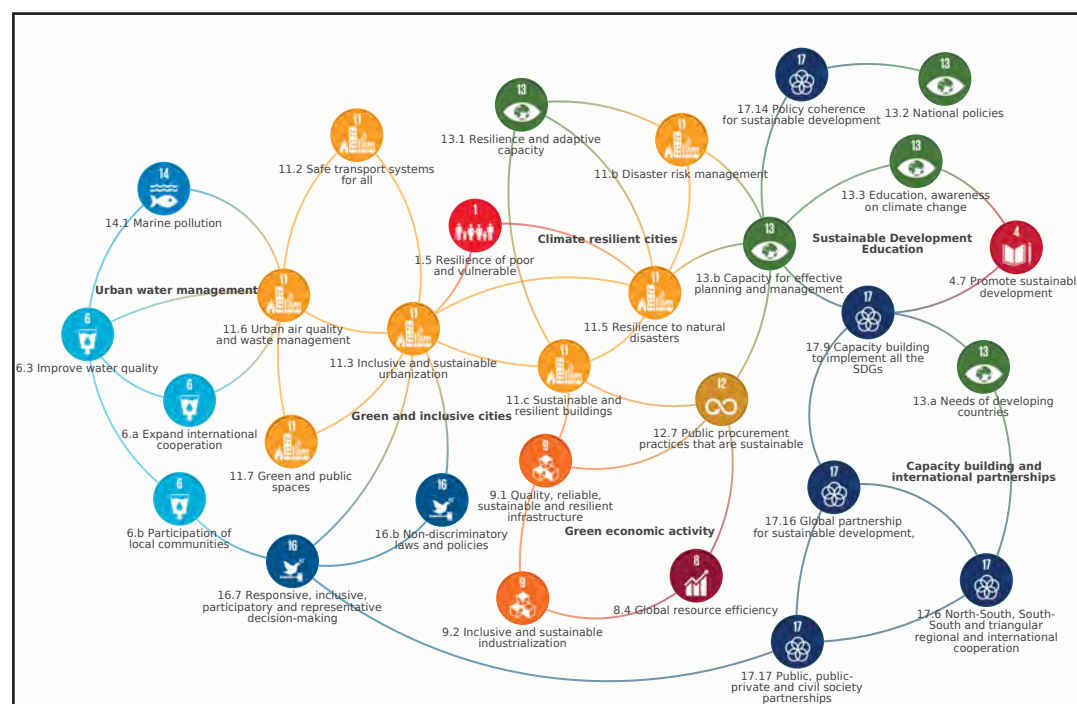
Linkages to SDGs

Under SDG 11 (sustainable cities and communities) there are 10 targets and 15 indicators. The overall aim is to make cities and human settlements inclusive, safe, resilient and sustainable. The cities and local action area can also have an impact on other SDGs such as SDG 1 (no poverty), SDG 6 (clean water and sanitation), SDG 7 (affordable and clean energy systems), SDG 8 (decent work and economic growth) and SDG 13 (climate action).

Cities and local action intersect with the context of climate action around the proper management of concentrated resources and securing these

resources against environmental shocks. Urban water management prevents leakage of pollutants into open waterways and ocean systems (targets 11.6, 14.1). Sustainable and accessible greenspaces, transport systems and buildings allow for fair and efficient use of available space (targets 11.7, 11.2, 11.3, 16.b). As economic engines cities must revolutionize their economic activity to be resilient (targets 11.c, 12.7, 9.1, 8.4). Many SDG targets (11.5, 11.b, 11.c, 13.1) focus on building up resiliency to safeguard cities and their concentration of human and economic resources against climate shocks.

Figure 16: *SDG interlinkages in the context of cities and local action for climate action*



Source: ESCAP analysis

Challenges to accelerating cities and local action

In the Asia-Pacific region, there are multiple mega cities and rapid rates of urbanization. The highest rate of growth is in intermediate cities with populations up to 500,000, where much of the needed infrastructure has not been built yet. Therefore, the city level is crucial for ambitious climate action, yet it faces certain challenges.

- **Lack of institutional capacity and financing:** To formulate and implement mitigation and adaptation strategies at the local level, institutional capacity and financing are required, but they are missing in many cases.
- **Alignment of regulation and policies:** Policy instruments and measures for specific spatial planning strategies need to be aligned and placed on a common urban development strategy. Such a comprehensive low-carbon development strategy is still lacking for many cities.
- **Missing local GHG inventories and vulnerability assessments for climate action planning:** Understanding local emissions patterns and climate vulnerabilities, including linked to land use changes, is a precondition for the development of low-carbon, resilient communities. Many cities in the region have adopted the Global Protocol for Community Scale Emissions, the global standard for local GHG emission inventories supported by UNFCCC. However, the measurement of consumption-based emissions in these inventories is technically complex and therefore cities often only capture production-based emissions. The city climate vulnerability assessments supported in the Asia-Pacific region by the Cities and Climate Change Initiative of UN-Habitat offer similar assessments such as the Climate Risk and Adaptation Framework and Taxonomy, a standardized global reporting framework that enables cities to perform robust and consistent reporting of local climate hazards and impacts.
- **Financing local climate action:** This requires national governments to establish enabling policies and instruments that raise and direct the

required finances toward implementation at the city level. This may include the national government raising funds for distribution to city governments through Special Purpose Vehicles, or empowering city governments to raise their own finances, including through access to debt capital markets for creditworthy candidates. Most international climate finance is only available to national governments, so cities are dependent on national counterparts to provide access. If countries are to raise the finances necessary to transition infrastructure and urban development to achieve country NDC and NAP targets, national and city governments are mutually dependent on one another, and therefore need to work collaboratively on financing policies, instruments and financial flows.

How to accelerate cities and local action for Paris Agreement implementation

Urban growth shows no signs of stopping with over half of the region's population located in urban centers as of 2019.⁹⁷ These economic and social centers are also leading GHG emissions producers and home to climate-vulnerable communities in informal settlement, but they can also be the drivers of national efforts to reduce GHG emissions and build climate resilience. Local government units are required to address a multitude of nationally mandated sectoral tasks, and they need guidance and support to design actionable climate change interventions, especially if they lack human resources. As such, a first entry point suggests aligning sectoral plans and climate change policies to ensure coherence of actions and thereby contribute effectively to national climate change targets. Stepping up ambition at the city and local level in sectoral areas such as buildings, transportation and mobility, energy efficiency, land use, waste and public procurement management can improve human and environmental well-being through urban transformation.

Opportunities and instruments for accelerating climate action at the city and local levels are identified in this section. Relevant initiatives and further resources for the urban climate change context are presented.

Opportunities to foster climate action at the city and local levels

As discussed above, an important response to the threat of anthropogenic climate change is action at the local level. Accordingly, numerous activities have already been initiated or are operational. Those initiatives offer opportunities to overcome existing challenges for local climate action and thus accelerate the implementation of the Paris Agreement, including through the approaches outlined below.

Policy coherence and planning processes

Supporting local governments and decision-makers in optimizing planning and in developing strategies for enhanced climate action, capacity development and climate mainstreaming. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Set city-level baselines, targets and reporting on climate action to support national measures using international frameworks and tools under UNFCCC, supported through city networks such as the Global Covenant of Mayors for Climate and Energy. These include the

framework of the Global Protocol for Community Scale Emissions for city-level GHG emissions inventories, the Climate Risk and Adaptation Framework and Taxonomy for urban adaptation and the Climate for Urban Sustainability tool for action on city-level mitigation targets.

- Integrate people living in informal settlements and those working in the informal economy, particularly in waste management, into a city-wide climate action plan and investments to maximize their contributions to climate action. In cities like Pune, India, informal waste workers organized a cooperative to work with the city in delivering waste collection and management services. The annual GHG reduction from plastic waste diversion and recycling from this model is estimated to be approximately 50,000 metric tons of CO₂e, comparable to removing more than 10,000 passenger cars from the city's roads.⁹⁸
- Plan according to the 15-minute city approach to land use and mobility planning created during the COVID-19 recovery. It promotes micromobility, more space for walking and cycling, and more extensive

existing mass transit infrastructure to nurture a network of walkable neighbourhoods with lower emissions.

» Measures supporting policy coherence and planning processes

- Climate change considerations in the areas of both mitigation and adaptation should be **mainstreamed across regular city planning activities** for different sectors (e.g., transport, buildings, waste management, energy).
- To increase ambition on certain sectors (e.g., transport), cities might also apply the measure of creating a **sectoral road map**.
- Climate-related pathways in certain sectors can also be incentivised by **setting standards and regulations** (e.g., green building codes) and supporting institutional capacities to apply and implement those standards with private and public actors from the construction and housing sectors.
- Domestic planning processes should be aligned with on-going processes for revision of **NDCs** and development of **NAPs**.

» Relevant initiatives supporting policy coherence and planning processes

- **Zero Carbon Buildings for All** (*Index V – 2*) is a multi-partner global initiative endorsed by the United Nations Secretary-General and launched at the Climate Action Summit in September 2019. The initiative will leverage the leadership of government, industry and civil society to secure commitments from two audiences: national and local leaders, to develop and implement policies to drive decarbonization of all new buildings by 2030 and all existing buildings by 2050; and financial and industry partners, to provide expert input and commit buildings investment in developing countries of \$1 trillion by 2030.
- **Global Covenant of Mayors for Climate and Energy** (*Index V – 13*) is largest global alliance for city climate leadership, to which mayors of a number of Asia-Pacific cities are members. By 2030, Global Covenant cities and local governments could account for 2.3 gigatons CO₂e of annual emissions reductions, matching yearly passenger road emissions

of Argentinian, China, France, Mexico, the Russian Federation and the United States of America combined.

- The **Carbon Neutral Cities Alliance** (*Index V – 6*) is a collaboration of leading global cities working to cut greenhouse gas emissions by 80-100 per cent by 2050 or sooner. The 22 member cities collaborate to share lessons in planning for and implementing deep carbon reductions and opportunities to accelerate best practices in deep decarbonization.
- The **EcoMobility Alliance** (*Index V – 11*) is a network of ambitious cities that reinforces local government commitments to the SDGs by transforming transportation systems and reconfiguring mobility patterns, and focusing on integrated urban planning, improving health and quality of life, reducing dependency on private automobiles and applying sustainability principles in passenger and freight mobility.
- The initiative **Planners for Climate Action** (*Index V – 12*) aims to catalyse and accelerate climate action through responsible and transformative urban and regional planning practice, education and research.

Finance and regulatory frameworks

Enabling access to climate finance for city climate action and mobilization of private capital. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Incentivise green, affordable, accessible building supply chain practices through public-private partnerships to invest in alternative construction materials and renewable energy technologies;
- Apply polluter-pays levies to finance the expansion of low emission, affordable public transit systems;
- Leverage national municipal finance subsidies for city climate action, including the creation of conditions that support private investment in climate action;
- Encourage intermediate cities to work together to pool resources that further unlock capital; and
- National governments can empower cities to raise their own climate finance and access international climate funding. While devolution of

responsibility for investment decisions will differ depending on country contexts, high levels of transparency and clear lines of accountability are paramount to maintain trust and prevent misuse of funds.

» Supportive measures for finance

Dedicated financial support instruments exist to assist developing countries in accessing required funding.

- The **financial mechanism of UNFCCC** offers financial instruments for multiple purposes related to climate action, including within the context of cities. For example, the GCF explicitly mentions cities as a target group.
- Further **multilateral climate finance** vehicles are also supporting urban projects and programmes. These include MDBs (e.g., World Bank, ADB) as well as climate funds (e.g., CIF).
- As city governments might be short in funding capital-intensive infrastructure projects on their own, **public-private partnerships** can be an adequate business model for mobilizing additional financial resources, while maintaining the management of crucial urban infrastructure services (e.g., transport).
- National governments can **establish enabling devolution policies and instruments** that raise and direct the required finances toward implementation at the city level. This may include the national government raising funds and pooling risks for distribution to intermediary city governments, in particular through **Special Purpose Vehicles**, such as the PT Sarana Multi Infrastruktur (PTSMI) model in Indonesia, or empowering city governments to raise their own finances, including through access to **debt capital markets** for creditworthy candidates.

» Relevant initiatives in the context of finance

- **Building Climate Resilience for the Urban Poor** (*Index V – 3*) aims to help 150 million urban poor adapt to climate change in informal settlements by 2023 and to build climate resilience of 600 million vulnerable people by 2030. The focus lies on informal settlements in 140 'hotspot' cities in 50 developing countries. To reach these goals,

partners aim to mobilize \$15.2 billion over a first phase for four years, ultimately scaling up financing to \$60.8 billion by 2030 from a variety of sources.

- The objective of **Leadership for Urban Climate Investment (LUCI)** (*Index V – 4*) is to scale-up and leverage climate finance for cities. More specifically, it aims to strengthen the capacity of 2,000 cities in project preparation by 2030, to link 1,000 climate-smart urban projects to finance by 2025 and to enable 100 climate-smart urban projects to use new financing mechanisms by 2025.
- The **Cities Climate Finance Leadership Alliance** (*Index V – 7*) is a multi-level and multi-stakeholder coalition aimed at closing the investment gap for urban subnational climate projects and infrastructure.
- The **Transformative Actions Program (TAP)** (*Index V – 9*) aims to catalyse and improve capital flows to cities, towns and regions, and strengthen their capacity to access climate finance and attract investment. Through TAP and its partners, local and regional governments can receive support through a matching platform to develop their infrastructure concepts into highly transformative, mature, robust and bankable projects ready for financing and implementation. TAP connects local and regional governments, technical experts and financial institutions.

Capacity

City administrations need to scale-up their technical capacities to act on climate-friendly planning approaches and integrate them into their long-term master plans. In addition, capacity-building can contribute to the knowledge on how to access financial resources for realizing ambitious urban climate projects. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Join city-to-city networks to exchange best practices and learn from other cities' experiences; and
- Integrate climate change aspects into national spatial planning frameworks and training curriculums for city planners.

National, regional and city governments often gather data that is valuable to each other and sharing this information can empower stakeholders and improve climate decision-making and accountability.

» Supportive measures for capacity

Dedicated capacity-building support on mobilizing climate finance or designing financial products can help to overcome and alleviate challenges.

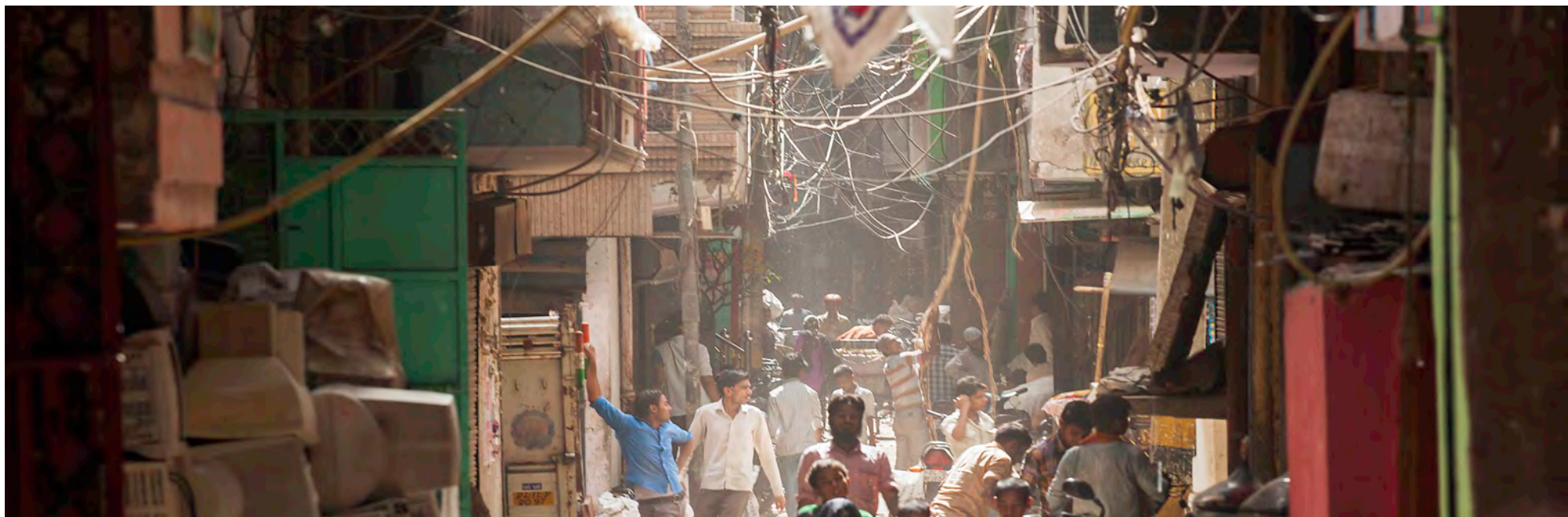
- **International or regional city networks** can facilitate the exchange of best-practice examples and approaches how to integrate climate action in multiple sectors.
- Bilateral and multilateral development agencies are also actively supporting cities in building up the required capacities by providing information and setting up dedicated **training programmes on designing sectoral road maps or accessing financial resources**.

» Relevant initiatives for capacity

- The **Action Towards Climate-friendly Transport (ACT)** initiative

(*Index V – 1*) is a global coalition of more than 100 entities committed to accelerate the decarbonization of the transport sector and with this, to catalyse transport as an enabler of sustainable development in line with the 2030 Agenda and the Paris Agreement. The implementation of this initiative will be led by UN-Habitat. Following the establishment of a pathway to action by the end of 2020, ACT will focus on capacity-building and implementation of its four components with designated lead institutions and countries for each component.

- The **C40 Cities Climate Leadership Group (C40)** (*Index V – 5*) connects 94 cities to take bold climate action, leading the way towards a healthier and more sustainable future. Representing 700+ million citizens and one quarter of the global economy, mayors of the C40 cities are committed to delivering on the most ambitious goals of the Paris Agreement at the local level. Created and led by cities, C40 is focused on tackling climate change and driving urban action that reduces GHG emissions and climate risks, while increasing the health, well-being and economic opportunities of urban citizens. C40 is governed by a



steering committee made up of C40 member city mayors, elected by their peers to represent the geographic diversity of the network. In addition to formal peer-to-peer networks, C40 also offers member cities additional services through its programme model. Programmes range from localized direct support, to improved access to data, to broad-based partnered efforts around finance, city diplomacy and inclusive climate action.

- The **Urban-LEDS project** (*Index V – 8*) addresses integrated low-emission and resilient development in more than 60 cities, including cities in Bangladesh, India, Indonesia and the Lao People's Democratic Republic. In addition, 16 European cities act as source cities and support peer-to-peer exchange and cooperation.
- The **SLOCAT Partnership** on sustainable, low-carbon transport (*Index V – 10*) is an international multi-stakeholder partnership that enables collaborative knowledge and action for sustainable, low-carbon transport.

Case study on cities and local action from the Asia-Pacific region

Activity title: C40 Cities Finance Facility

Country / region: C40 cities, including in the Asia-Pacific region

Year of implementation: 2015

Developed under which measure / initiative: C40 climate leadership group, as well as in partnership with the Leadership for Urban Climate Investment (LUCI)

Further reading: See the C40 CFF website: www.c40cff.org/about

Description of activity

The C40 Cities Finance Facility (CFF) aims to support cities in reducing GHG emissions and increasing climate resilience by mobilizing finance for local level change. It is a joint project of the C40 Cities Climate Leadership Group (C40) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. It was launched during COP 21 in Paris, to support C40 cities in developing and emerging countries in preparing and delivering sustainable, low-carbon and climate action projects. The CFF facilitates access to finance for climate change mitigation and resilience projects in urban areas by providing technical assistance to develop sustainability priorities into bankable investment proposals. The current sectoral focus is on projects from adaptation, energy and transportation.

How does the activity help to implement the Paris Agreement?

The CFF supports cities in developing and emerging economies to develop finance-ready projects to meet the objectives of the Paris Agreement. By championing projects that will simultaneously deliver significant development benefits, the CFF also helps cities to implement the SDGs, the Addis Ababa Action Agenda and the New Urban Agenda.

Specific “acceleration success factors” of the activity

The CFF provides technical assistance, including the following:

- A dedicated CFF in-city expert, alongside national and international experts, joins the city's project team to help develop technically and financially sound investment projects structured in the city's best interest;
- The knowledge and learning programme catalyses change by disseminating knowledge to other cities, practitioners and policymakers to remove barriers to climate action in cities;
- A tailored plan of trainings and workshops develops institutional capabilities within city administrations to access finance, structure infrastructure projects in a sustainable manner and carry out similar projects more independently in the future; and
- The CFF forges in-kind strategic partnerships with like-minded organizations and networks based on shared vision and value addition.





Resilience and Adaptation

Area 6

What resilience and adaptation mean for implementing the Paris Agreement

The action area on **resilience and adaptation** outlines global and regional efforts to address and manage the impacts and risks of climate change, particularly in most vulnerable communities and nations in the Asia-Pacific region.

Relevance of resilience and adaptation in the context of climate change

Globally and throughout the Asia-Pacific region, the impacts of anthropogenic climate change have become more and more evident. Changing weather patterns, rising temperatures and droughts, rainfall variability and flooding, sea-level rise and storms have catastrophic implications for individuals and communities and for entire economies and regions, with the most vulnerable being most affected. The Asia-Pacific region is most vulnerable to climate induced disasters, which occur with increased frequency.⁹⁹ ESCAP estimates show that the annualized average losses due to natural disasters through to 2030 are to the extent of \$675 billion, which is around 2.5 per cent of the region's current gross domestic product. Climate and weather-related

disasters drive the region's disaster risk landscape accounting for more than 85 per cent of annualized losses.¹⁰⁰ Accelerated climate action for mitigation and adaptation is therefore imperative for the countries in the Asia-Pacific region to increase their resilience to climate change to cope with the increasing frequency and intensity of impacts induced by climate change.

References in the Paris Agreement

The institutional architecture built up over the past 25 years and the multitude of adaptation-related initiatives under the United Nations climate change process has fostered significant action to build resilience to the impacts of climate change in countries around the globe.¹⁰¹ Resilience and adaptation are core goals of the Paris Agreement, particularly in the context of fostering adaptive capacity and reducing vulnerabilities to the adverse effects of climate change.¹⁰² The Agreement requires all Parties, as appropriate, to engage in adaptation planning and implementation through NAPs, vulnerability assessments, monitoring and evaluation, and economic diversification, among others. Articles with specific relevance for resilience, loss and damage are

Article 2.1 (b) (adaptation and climate resilience as a core objective), Article 7 (adaptation) and Article 8 (loss and damage).¹⁰³ Enhanced resilience to the adverse impacts of climate change is core for the Asia-Pacific region, and accelerating action on the ground is of highest priority. While countries are active under UNFCCC in identifying their opportunities, significant efforts to boost implementation of action are required. The next section lists approaches for addressing these needs.

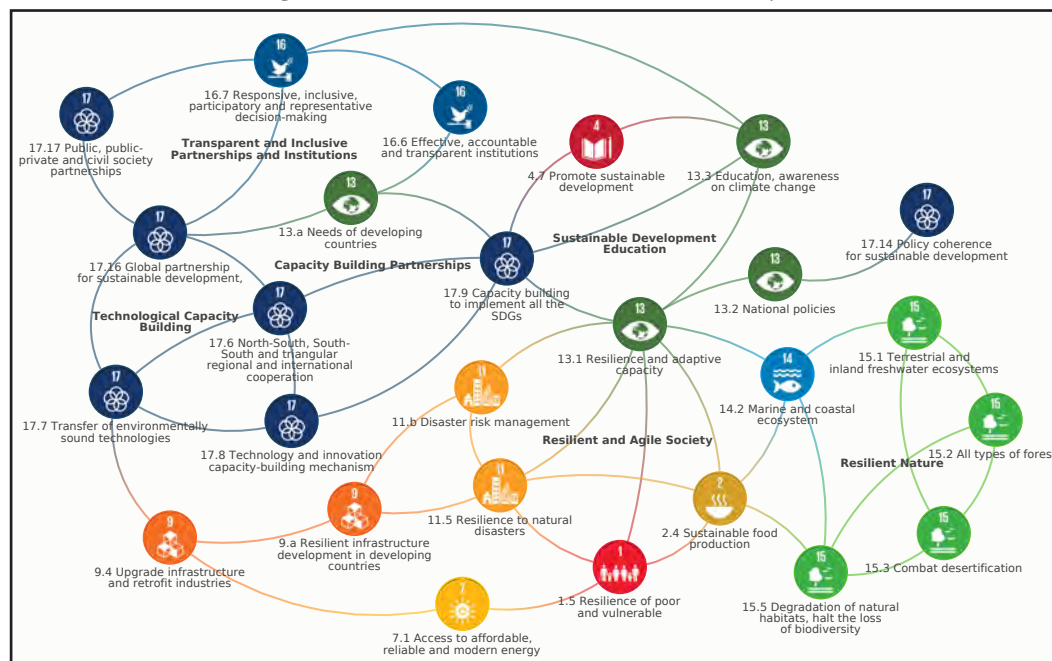
Linkages to SDGs

Building resilience to climate change is linked with SDG 13 (climate action), and here particularly represented by target 13.1 (strengthen resilience and adaptive capacity). SDG 15 (life on land) is linked with enhancing resilience to climate change, for instance through target 15.1 (ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands), target 15.2 (promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation), or target 15.3 (combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world).

Enhanced resilience will have direct and indirect benefits for and interlinkages with various other SDGs, such as SDG 2 (zero hunger), SDG 6 (clean water and sanitation) and SDG 11 (sustainable cities and communities).¹⁰⁴

Broadly speaking, SDG targets describe a resilient and agile society and resilient nature when analysed in the context of climate action. Enhancing the resiliency of nature provides services such as carbon sinks and protection from natural disasters (targets 14.2, 15.1, 15.2, 15.3, 15.5). A resilient and adaptive society responds to the vulnerabilities of both infrastructure (targets 9.4, 9.a, 11.b, 11.5) and human well-being (targets 1.5, 2.4, 14.2).

Figure 17: SDG interlinkages in the context of resilience and adaptation for climate action



Source: ESCAP analysis

Challenges to accelerating resilience and adaptation

Countries in the Asia-Pacific region have made significant efforts and progressed in becoming more resilient to the adverse impacts of climate change over the past decades. However, the region is very heterogeneous and success factors and barriers differ from country to country. Important challenges that apply to many countries in the light of further accelerating resilience to climate change are listed below.

- **Policy coherence:** Throughout the region there is still room for optimized integration of resilience matters in strategic planning of regional, national and local processes and private sector activities.
- **Limited access to finance:** The availability of and the access to

financing instruments that support the build-up of a climate resilient economy varies greatly between countries and requires further concerted efforts.

- **III-preparedness for disaster recovery:** Many countries in the region are poorly prepared to respond to disaster impacts through specific recovery mechanisms.



How to accelerate resilience and adaptation for Paris Agreement implementation

Action to support climate adaptation can be stepped up through the following:

- A substantive increase in adaptation finance allocations, including de-risking investments and the wider availability of insurance;
- Mainstreaming of climate resilient principles in infrastructure design and investments;
- Mainstreaming of climate adaptation into national and subnational development planning and budgeting; and
- Wider engagement of private sector participation (to protect/secure investments).

This section presents opportunities and measures, relevant initiatives, as well as further resources to foster climate action for enhanced resilience and adaptation. In addition, a case study illustrates an example of enhancing resilience in the Asia-Pacific region, and a checklist enables the identification of gaps and opportunities for enhanced resilience and adaptation.

Opportunities to advance resilience and adaptation

In the context of the Paris Agreement, accelerated action to build up resilience to climate change is already reflected in NAPs and NDCs of many countries in the Asia-Pacific region. There are a broad range of measures for accelerated climate action to address the challenges of climate change adaptation and to enhance resilience.

Policy coherence and planning processes

Development and implementation strategies, road maps, processes and plans are very useful instruments to assist with raising awareness, mainstreaming and integrating resilience and adaptation issues into policymaking on various levels. Such instruments are currently in various stages of development in many countries in the Asia-Pacific region. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Engage community actors to account for all vulnerable stakeholders;
- Improve practices for measurement and evaluation of climate risk; and
- Integrate adaptation and reliance considerations into local development schemes.

» Measures supporting policy coherence and planning processes

- Under UNFCCC, **NAPs** are an important instrument to plan, initiate, consolidate, or update domestic action. Many countries in the region are already developing their NAPs, while Fiji and Sri Lanka have already submitted their NAPs to UNFCCC. The NAP process enables countries to formulate and implement plans as a means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs. It is a continuous, progressive and iterative process which follows a country-driven, gender-sensitive, participatory and fully transparent approach. Efforts for aligning NAPs and NDCs need to be strengthened.
- Development of **early warning systems** and **disaster risk reduction strategies** are important strategies towards enhanced resilience.
- Domestic planning processes should be aligned with ongoing processes for the revision of **NDCs** and the development of **NAPs**. As important mitigation measures, renewable energy investments will need to be de-risked and designed to be resilient.

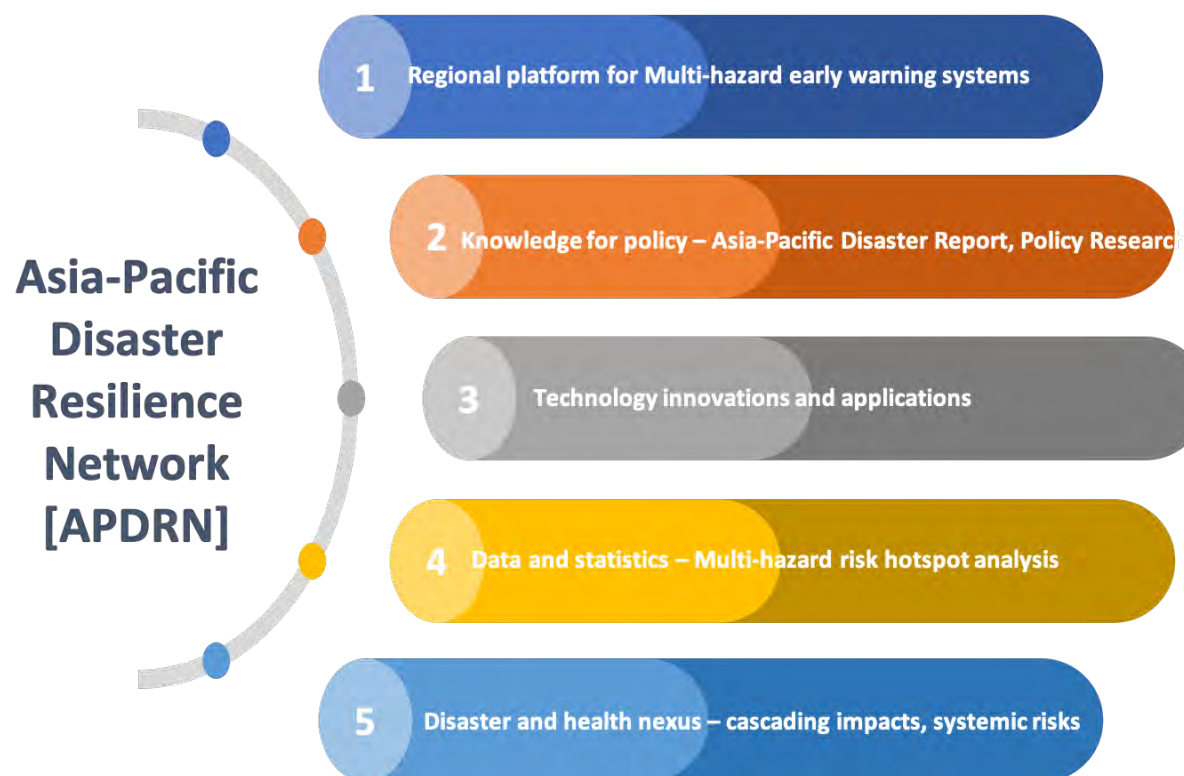
» Relevant initiatives supporting policy coherence and planning processes

- The **Resilience and Adaptation Call for Action** (Index VI – 1) sets out commitments to respond to the threat of climate change by putting climate risk at the center of decision-making and increasing the availability of adaptation and resilience finance. It has been endorsed by more than 100 member States and self-governing territories, 16 United Nations institutions and international financial institutions, as well as 70 other organizations and institutions.
- The **Coalition for Climate Resilient Investment** (Index VI – 2) has

the objective to transform infrastructure investment by integrating climate risks into decision-making.

- The **Risk-Informed Early Action Partnership (REAP)** (Index VI – 3) aims to make 1 billion people safer from disaster by delivering new and improved early warning systems and helping communities prepare the plans and resources needed to respond when disaster strikes.
- The **Regional Road Map for Implementing the 2030 Agenda for Sustainable Development in Asia-Pacific** (Index VI – 7) was adopted by ESCAP member states in 2017 and focuses on disaster risk reduction as one of the priority areas of regional action.

Figure 18: Work streams of the Asia-Pacific Disaster Resilience Network to accelerate adaptation and resilience



Source: APDRN

- **Asia-Pacific Issue-Based Coalition on Building Resilience** (*Index VI – 9*) is a platform for United Nations agencies to work together to accelerate action on disaster risk reduction, climate change adaptation and resilience in the region. The coalition promotes coordinated support to all member States and the United Nations system at the country level in their implementation of the 2030 Agenda, the Sendai Framework for Disaster Risk Reduction and the Paris Agreement.
- The United Nations Programme of Action and the United Nations Resilience Guidance can be leveraged to guide the plans and actions of the **Pacific Resilience Partnership** (*Index VI – 10*) mandated by the leaders of the Pacific countries to support national implementation of the Framework for Resilient Development in the Pacific.
- **The Asia-Pacific Disaster Resilience Network (APDRN)** (*Index VI – 8*), established by ESCAP (2019) through its Committee on Disaster Risk Reduction, supports integrated multi-hazard early warning systems and closes the gaps in multi-hazard risk assessment and early warning systems (Figure 18). This network of networks mobilizes expertise and resources to enhance adaptive and anticipatory capacities of member countries for resilience.¹⁰⁵
- **The Global Commission on Adaptation** (*Index VI – 14*) was launched in the Hague on 16 October 2018, with the mandate to encourage the development of measures to manage the effects of climate change through technology, planning and investment. The group is led by the former United Nations Secretary-General Ban Ki-moon and other high-level officials.
- **The Global Resilience Partnership** (*Index VI – 13*) is an inclusive and diverse partnership of organizations joining forces to help vulnerable people and places to thrive in the face of shocks, uncertainty and change. The Partnership is guided by the belief that resilience underpins sustainable development in an increasingly unpredictable world.

Finance and regulatory frameworks

Existing bilateral and multilateral climate financial instruments can assist countries with developing disaster risk finance strategies, mobilizing capital and providing finance, and reforming investment mechanisms to support

climate-resilient development and adaptation measures. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Boost interlinkages between insurance mechanisms and social protection measures;
- Track existing resilience and adaptation investment to identify outstanding gaps; and
- Update domestic financing frameworks to incentivise the uptake of climate financing products.

» Supportive measures for finance

Dedicated financial support instruments exist to assist developing countries in accessing required funding, such as:

- The **financial mechanism of UNFCCC** offers financial instruments for fostering resilience and adaptation.
- Outside of the financial mechanism of UNFCCC, there is a broad variety of climate finance vehicles to support resilience and adaptation measures. The vast majority of financial support for resilience and adaptation in the Asia-Pacific region originates from **bilateral official development assistance**, as well as from **multilateral assistance** (mainly from ADB and the World Bank).
- **National climate change funds** can blend international, domestic and private capital to address climate purposes, including for resilience and adaptation. An example is the **Indonesia Climate Change Trust Fund**.
- **Green bonds** are instruments that can help to generate revenue streams for dedicated resilience and adaptation purposes. For instance, China and Fiji have gained experiences with green bonds.
- Specific financial products for resilience include **insurance products**, which are pioneered by numerous development agencies, financial sector stakeholders and dedicated initiatives.

» Relevant initiatives for climate adaptation finance

- The **Green Climate Fund (GCF)** (see *Area 2*) is the world's largest dedicated fund helping developing countries reduce GHG emissions and enhance their ability to respond to climate change. GCF has a

crucial role in serving the Paris Agreement by channelling climate finance to developing countries.

- Under the **Green Climate Fund Readiness and Preparatory Support Programme** (*Index II – 9*), funding up to \$3 million per country is available to formulate NAPs and/or other adaptation planning processes. This may include support for subnational adaptation plans and/or sectoral adaptation planning processes.
- The **Adaptation Fund** (see *Area 2*) finances climate change adaptation and resilience activities in developing countries that are Parties to the Kyoto Protocol and vulnerable to the adverse effects of climate change. All applicants for funding must submit project proposals through a national, regional or multilateral implementing entity. Proposals also require endorsement by the designated authorities of the country in which the activities would take place.
- The Adaptation Fund offers **Readiness Grant Funding** (*Index II – 10*) to help national implementing entities provide peer support to countries seeking accreditation with the Fund and to build capacity for various climate finance readiness activities in the context of adaptation.
- **Asia-Pacific Climate Finance Fund**¹⁰⁶ (*Index VI – 11*) is a multi-donor trust fund established in April 2017 by ADB with the German Government as the first contributor. The objective of the fund is to support the development and implementation of financial risk management products that can help unlock capital for climate investments and improve resilience to the impact of climate change.
- Under the **Global Environment Facility (GEF)** (see *Area 2*), both the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF) have finance available for adaptation. The LDCF supports LDCs in preparing and implementing national adaptation programmes of action and supports the formulation of NAPs. By contrast, SCCF funding is available to all vulnerable developing countries. The SCCF prioritizes adaptation and technology transfer in key sectors, such as water resource management, agriculture, infrastructure and health. In addition, the SCCF funds the first steps of the NAP process in countries outside of the LDC category.
- CIF includes the **Pilot Program for Climate Resilience (PPCR)**

(*Index II – 11*) which supports developing countries and regions in building their adaptation and resilience to the impacts of climate change. First, the PPCR assists governments in integrating climate resilience into strategic development planning across sectors and stakeholder groups. Second, it provides concessional and grant funding to put the plans into action and pilot innovative public and private sector solutions.

- The **InsuResilience Global Partnership** (*Index VI – 4*) strives to mitigate the impacts of climate-related disasters on poor and vulnerable people by means of pre-agreed financing and risk transfer solutions.

Capacity

Faster progress to implement the Paris Agreement is oftentimes prevented by a lack of knowledge or misinformation on the need to build resilience, the benefits of adaptation measures or the technical solutions and procedures. Planning processes and the design of financial instruments can be positively informed by capacity-building measures. To raise the ambition of NDCs, governments could consider the following aspirational points:

- Learn from the COVID-19 experience to strengthen emergency contingency plans and efforts to monitor disaster risks;
- Enhance the capacity to develop cascading risk scenarios of converging biological and natural hazard risks;
- Strengthen capacity to develop an integrated scenario assessment for strategic management and policy development in the face of multiple climate change scenarios,
- Improve capacities for national development banks to develop green/ climate finance products suited to or viable in local markets, especially for microenterprises and SMEs and single income households;
- Improve capacities to generate and/or collect data that are crucial for adaptation planning, including building confidence and establishing data sharing mechanisms to access and share data between government agencies; and
- Strengthen capacity to develop an integrated scenario assessment for strategic management and policy development in the face of multiple climate change scenarios.

» Supportive measures for capacity

Dedicated capacity-building support on mobilizing climate finance or designing financial products can help to overcome and alleviate challenges.

- Bilateral and multilateral development agencies are actively supporting countries in building up the required capacities by providing information and setting up dedicated training programmes.

» Relevant initiatives for enhanced capacity

- **Article 6 Support Facility**¹⁰⁷ (*Index VI – 12*) was set up in 2019 by ADB, the Governments of Germany, Japan and Sweden and provides technical, capacity-building, and policy development support to ADB developing member countries to enhance their capacity and preparedness to access new carbon markets envisaged under the framework of Article 6 of the Paris Agreement. The Facility supports developing member countries to identify, develop and pilot mitigation actions for achieving a critical mass of expertise and lessons learned thereby enhancing their ability to contribute to international negotiations and preparedness to operationalize Article 6 of the Paris Agreement.
- Under the Global Commission on Adaptation, the **Support for Smallholder Farmers initiative** (*Index VI – 5*) intends to help 300 million small-scale agricultural producers to enhance their resilience to a changing climate through advisory services and information, as well as access to improved risk management and financial services.
- The **LDC Initiative for Effective Adaptation and Resilience (LIFE AR)** programme (*Index VI – 6*) supports the world's poorest countries to adapt to climate change and build a climate-resilient future for their citizens, for example through provision of best-practice cases.
- The **ESCAP APDRN** is in line with the SDGs (*Index VI – 8*).

Case study example on enhancing resilience and adaptation in the Asia-Pacific region

Activity title: Asia-Pacific Disaster Resilience Network (*Index VI – 8*)

Country / region: Asia-Pacific

The Asia-Pacific Disaster Resilience Network (APDRN) was established by ESCAP to support integrated multi-hazard early warning systems and close the gaps in multi-hazard risk assessment and early warning systems. As a network of networks, APDRN mobilizes expertise and resources to establish multi-hazard early warning systems. The network is built around five work streams:

1. Early warning systems – The network has already mobilized regional cooperation around early warning systems for tropical cyclones under the World Meteorological Organization/ESCAP Panel on Tropical Cyclones. The network is in the process of developing early warning systems for slow-onset disasters such as floods and drought, and it will add biological hazards.
2. Knowledge for policy – Under the network, ESCAP produces a host of thematic knowledge products including the biennial Asia-Pacific Disaster Report. These thematic knowledge products will be broadened to include integrated natural and biological hazard risk analytics.
3. Technology innovations and applications – The network brings together space data applications, artificial intelligence and digital connectivity for disaster management. The components of this work stream can be expanded to include both health and disaster management.
4. Data and statistics, geospatial information – Under one platform, the network assembles geospatial information and services for disasters, disaster-related statistics and big data analytics to identify disaster risk hotspots and to support scenario-based risk analysis, etc.
5. Disaster and health nexus – The platform now includes health-related data, to develop cascading risk scenarios and close the gaps in integrated analytics from multiple data sources.

The network developed cascading risk scenarios including the COVID-19 pandemic and climate extremes in South Asia, which served as the basis of well-informed webinars with key stakeholders. The following series of products and services are related to that effort:

- Building resilience to cascading disasters through regional cooperation in South Asia: Lessons learned from the COVID-19 pandemic to build back better. Summary for policymakers (forthcoming).
- Scenario-based risk analytics for managing cascading disasters – A pathway to manage risks and protect people in South Asia.
- Policy brief: When crises converge: Responding to natural disasters in South Asia during COVID-19
- Policy study: Protecting the most vulnerable to cascading risks from climate extremes and COVID-19 in South Asia
- Policy study: COVID-19 and South Asia: National strategies and subregional cooperation for accelerating inclusive, sustainable and resilient recovery
- A cascade of COVID-19 and climate extremes call for new algorithms to protect at-risk communities

The APDRN has been activated to support the building of cascading risk scenarios of converging biological and natural hazard risks. In particular, the APDRN study on scenario-based risk analytics for managing cascading disasters presents a methodology to develop an integrated scenario assessment for strategic management and policy development in the face of multiple climate change scenarios.

Endnotes

- 1 UNFCCC (2020a); WRI (2020). Note: International treaties or agreements, such as the Paris Agreement, can be signed by a legal representative of a State (e.g., head of government), but have to pass a national ratification process (e.g., majority vote by a parliament, referendum) for the provisions to take effect. WRI outlined individual ratification processes in a database.
- 2 The Paris Agreement also aims to limit the temperature increase to 1.5°C.
- 3 United Nations (2015)
- 4 The NDC Registry (interim) is available at <https://www4.unfccc.int/sites/ndcstaging/Pages/Home.aspx>. See also Bodle et al. (2016)
- 5 Climate Watch (2020a). Note: By November 2020, 16 countries had already submitted an updated NDC.
- 6 WRI (2017)
- 7 Ibid.
- 8 UNDP, UNEP, UNEP DTU, WRI (2020)
- 9 UNFCCC (2016)
- 10 UNEP (2019)
- 11 See www.unescap.org/publications/asia-and-pacific-sdg-progress-report-2020
- 12 The 2019 Climate Action Summit demonstrated the political leadership of 70 countries which committed to deliver more ambitious national climate plans in 2020 in line with strategies to achieve net zero emissions by 2050.
- 13 United Nations (2019a)
- 14 See <https://sustainabledevelopment.un.org/sdgaactions/about>
- 15 SEI (2019a), pp. 8-9)
- 16 ESCAP convenes yearly the Asia-Pacific Forum on Sustainable Development and supports the Asia-Pacific Climate Week.
- 17 United Nations (2019b)
- 18 Climate Watch (2020b)
- 19 IPCC (2018)
- 20 ESCAP (2018a)
- 21 Based on ESCAP (2018a)
- 22 See www.irena.org/remap
- 23 National Expert SDG Tool for Energy Planning (NEXSTEP) is available at <https://nexstepenergy.org/>.
- 24 CTCN website, available at <https://www.ctc-n.org/>.
- 25 IRENA (2016)
- 26 UNFCCC Standing Committee on Finance (2018)
- 27 IPCC (2018)
- 28 UNEP (2018)
- 29 ESCAP (2019d)
- 30 IPCC (2018)
- 31 For further discussion from the Asia-Pacific perspective, see ESCAP (2020): Economic and Social Survey of Asia and the Pacific.
- 32 World Bank (2019)
- 33 UNFCCC Standing Committee on Finance (2018); Watson and Schalatek (2018)
- 34 Watson and Schalatek (2018); Carrozza (2015)
- 35 United Nations (2015)
- 36 Ibid.
- 37 UNFCCC (2020c)
- 38 United Nations (2015); Fuessler et al. (2019)
- 39 See <https://sustainabledevelopment.un.org/sdgs>
- 40 OECD and Climate Policy Initiative (2015), OECD (2019)
- 41 Whitley et al. (2018)
- 42 Climate Policy Initiative (2019)
- 43 UNFCCC (2020c)
- 44 Ibid.
- 45 Carbon Pricing Leadership Coalition (2017),
- 46 NDC Partnership (2019)

- 47 World Bank (2019)
- 48 IFC (n.d.)
- 49 See <https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance>
- 50 UNDP (n.d.) Climate Public Expenditures and Institutional Review
- 51 See www.greenclimate.fund/news/gcf-meets-top-global-investors-boost-private-sector-climate-finance
- 52 See www.adb.org/what-we-do/funds/canadian-climate-fund-for-the-private-sector-in-asia-2
- 53 See more on Asia-Pacific REDD+ financing initiatives at https://www.unclearn.org/wp-content/uploads/library/infobrief_asia-pacific_region.pdf
- 54 Climate Watch (2020b), Note: Data are for 2016
- 55 Fishedick et al. (2014), p. 765
- 56 BSR (2016), p. 14
- 57 UNIDO (2015)
- 58 Ibid.
- 59 UNIDO (2017)
- 60 NCE (2018)
- 61 SEI (2019b)
- 62 United Nations (2019c)
- 63 See more at <https://theaseanpost.com/article/how-manufacturing-driving-growth-region>
- 64 Ibid.
- 65 A value greater than 1 indicates that exports of these products account for a larger share of total exports than the world average by Revealed Comparative Advantage, which is an index used in international economics for calculating the relative advantage or disadvantage of a certain country in a certain class of goods or services as evidenced by trade flows.
- 66 A circular economy seeks to rebuild capital, whether this is financial, manufactured, human, social or natural to ensure flows of goods and services. Available at <https://www.ellenmacarthurfoundation.org/circular-economy/interactive-diagram>
- 67 More on science-based target available at <https://sciencebasedtargets.org/>
- 68 More on RE100 available at <https://www.there100.org/>
- 69 More on EP100 available at <https://www.theclimategroup.org/ep100>
- 70 NCE (2018)
- 71 See www.unido.org/sites/default/files/files/2018-12/GCIP-Brochure-2018.pdf
- 72 More on Climate-KIC available at <https://www.climate-kic.org/>
- 73 UNEP (2019b)
- 74 IUCN (2018)
- 75 ESCAP (2019)
- 76 IUCN (n.d.)
- 77 United Nations (2019d)
- 78 Ibid.
- 79 IUCN (2019)
- 80 ESCAP (2018a)
- 81 See www.unescap.org/our-work/ict-disaster-risk-reduction
- 82 Pesticide Action Network Asia Pacific is a large network with very active communities: <https://panap.net/agroecology-in-action/>
- 83 UNEP (2019a), UNEP (2019b), Ecologic (2014)
- 84 Seddon et al. (2019)
- 85 Ecologic (2014), IUCN (2019)
- 86 University of Oxford (n.d.)
- 87 ESCAP (2019c)
- 88 African Development Bank, ADB, European Bank for Reconstruction and Development, Inter-American Development Bank (2019)
- 89 Seto et al. (2014), p. 927
- 90 Marr and Wehner (2012), p. 5
- 91 de Coninck et al. (2018), p. 331
- 92 Ibid
- 93 ESCAP (2018a)
- 94 Seto et al. (2014), p. 927
- 95 ESCAP (2019c)
- 96 UNEP (n.d.), p. 17

- 97 ESCAP (2019c)
- 98 ESCAP (2019d)
- 99 The 10 most devastating disasters in the Asia-Pacific region in 2019 were all climate and weather-related. See www.unescap.org/blog/2019-disasters-mirror-climate-crisis-asia-and-pacific-opportunities-accelerate-adaptive-actions
- 100 ESCAP (2019e)
- 101 <https://unfccc.int/news/how-the-un-climate-change-process-has-helped-build-resilience-over-the-past-25-years>
- 102 <https://unfccc.int/topics/adaptation-and-resilience/the-big-picture/new-elements-and-dimensions-of-adaptation-under-the-paris-agreement-article-7E>
- 103 See the Paris Agreement, available from https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf. Note the important distinction between adaptation and “loss and damage” in the UNFCCC negotiations.
- 104 See the SDG Knowledge Platform at <https://sustainabledevelopment.un.org/sdgs>
- 105 Operationalizing Asia-Pacific Disaster Resilience Network, ESCAP Committee on Disaster Risk Reduction, 6th Session, August 2019. See www.unescap.org/sites/default/files/Operationalizing%20the%20Asia-Pacific%20Disaster%20Resilience%20Network_English.pdf
- 106 www.adb.org/what-we-do/funds/asia-pacific-climate-finance-fund
- 107 www.thepmr.org/system/files/documents/ADB%20%20Article%206%20Support%t20Facility.pdf

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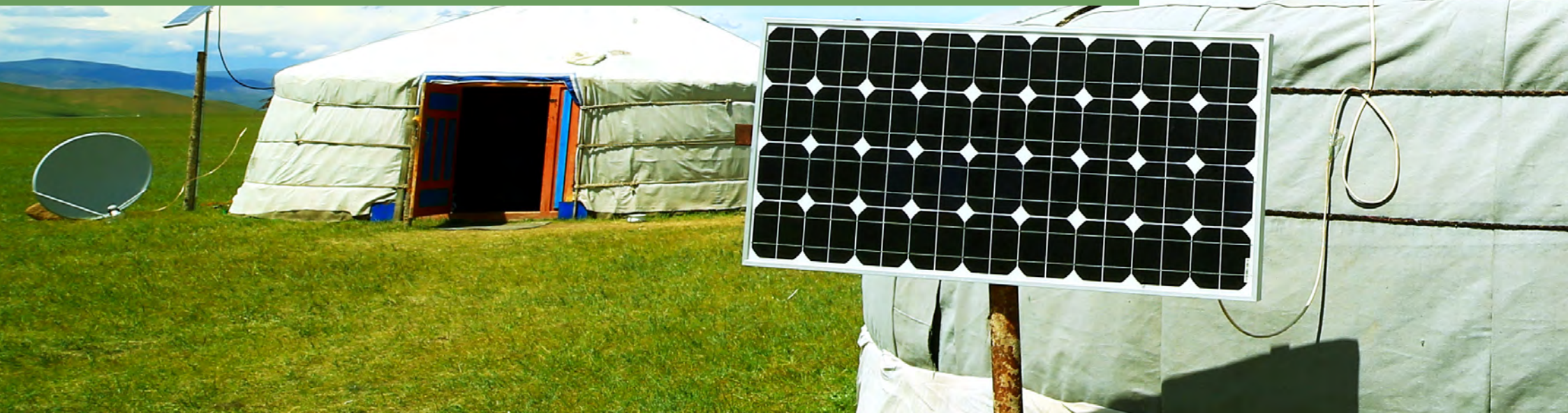
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Overview of initiatives to accelerate Paris Agreement implementation

Annex 1





For each of the action areas, this Annex provides a selection of important transformative initiatives with relevance for the Asia-Pacific region. These initiatives, among others, were presented at the Climate Action Summit in 2019 and they are included in the Global Climate Action portal.* This Annex also provides non-exhaustive lists of further information that can guide climate action to accelerate the implementation of the Paris Agreement.

*See www.un.org/en/climatechange/un-climate-summit-2019.shtml; and <https://climateaction.unfccc.int/views/cooperative-initiatives.html>.

Also note that Track 6 of the Secretary-General's Climate Action Summit, the Resilience and Adaptation Pact, aims for a fundamental shift in investments and behaviour. It seeks cross-sector commitment at the highest level for adaptation action at a global scale.

Area 1: Energy Transition

| Initiative | Further information | Index |
|---|--|-------|
| <p><u>Climate Ambition Alliance: Net Zero 2050</u></p> <p>The Climate Ambition Alliance announced at the Summit by Chile included 280 members (including more than 60 countries together with regions, cities, businesses and investors) that committed to carbon neutrality. In addition, 70 countries under the Alliance announced that they would enhance their Nationally Determined Contributions by 2020. The Alliance led by Chile, UNDP and the UNFCCC will continue its work to enlist more countries and entities to enhance their ambition in their NDCs and prepare strategies to become carbon neutral by 2050.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=94 | I-1 |
| <p><u>Powering Past Coal Alliance</u></p> <p>Under the Powering Past Coal Alliance more than 32 countries, 25 subnational governments and 34 companies have committed to work together to accelerate the transition from coal to clean energy. Members of the Alliance have committed to close approximately 131 GW of currently operating capacity and have already retired ~66 GW.</p> <p>The governments of the United Kingdom and Canada, as leaders of the Powering Past Coal Alliance, will continue to work with partners, including the United Nations Secretary-General, to expand the reach of the Alliance and its mission.</p> | <ul style="list-style-type: none"> • https://poweringpastcoal.org • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=88 | I-2 |
| <p><u>Cool Coalition</u></p> <p>The Cool Coalition is a platform that gathers and communicates on all initiatives related to cooling. It is organized around five clusters, each led by a key partner: national governments (led by the Efficient Cooling Initiative of the Climate and Clean Air Coalition), cities (led by the C40 and IRENA), businesses (led by UNEP), civil society (led by the World Wide Fund for Nature), and finance (led by the World Bank).</p> <p>The overall approach of the Cool Coalition is as follows: 1) Reduce the need for mechanical cooling; 2) Shift cooling's modality to renewables; 3) Improve conventional cooling; 4) Protect vulnerable people from the effects of heat extremes; and 5) Leverage cooperation between different actors.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=117 • https://unepdtu.org/new-coalition-to-tackle-cooling-blind-spot/ | I-3 |

| Initiative | Further information | Index |
|--|---|------------|
| <p><u>District Energy in Cities Initiative</u></p> <p>The District Energy in Cities Initiative is a multi-stakeholder partnership coordinated by UNEP, with international financial support. The Initiative aims to double the rate of energy efficiency improvements for heating and cooling in buildings by 2030, helping countries meet their climate and sustainable development targets. The Initiative supports local and national governments to build know-how and implement enabling policies that will accelerate investment in low-carbon and climate-resilient district energy systems. It currently provides technical support to cities in four pilot countries (Chile, China, India and Serbia) and 10 replication countries.</p> | <ul style="list-style-type: none"> • www.districtenergyinitiative.org | I-4 |
| <p><u>Climate Investment Platform</u></p> <p>The Climate Investment Platform supports decluttering the climate finance landscape and providing integrated and streamlined support to developing countries, emerging economies and the private sector. Support is offered by partner institutions such as GCF, UNDP, Sustainable Energy for All (SeforAll), International Renewable Energy Agency (IRENA) and REN21, among others.</p> <p>The ultimate goal is to reach ambitious climate targets. The service focuses on four key building blocks or tracks: climate targets in the context of NDCs, policies and regulations, financial de-risking, and access to capital markets. Partner institutions will support governments and private sector clients to scale up and accelerate climate investments starting with energy transition investments, including renewable energy and energy efficiency to contribute to the realization of ambitious NDCs.</p> | <ul style="list-style-type: none"> • www.climateinvestmentplatform.com • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=119 | I-5 |
| <p><u>Energy Storage Initiative</u></p> <p>The initiative aims to create a breakthrough in the battery/energy storage field and to provide access to 6.5 million people, mainly through solar hybrid mini grids with storage. The World Bank Group has committed \$1 billion for a first-of-its kind programme to accelerate investments in battery storage for electric power systems in low- and middle-income countries. This investment is intended to increase developing countries' use of wind and solar power, and improve grid reliability, stability and power quality, while reducing carbon emissions.</p> <p>World Bank Group financing is expected to mobilize another \$4 billion in concessional climate financing and public and private investments. The program aims to finance 17.5 gigawatt hours (GWh) of battery storage by 2025 – more than triple the 4-5 GWh currently installed in all developing countries.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=121 • www.esmap.org/energystorage | I-6 |

| Initiative | Further information | Index |
|---|---|-------|
| <p><u>Clean Cooking Fund</u></p> <p>Clean Cooking Fund supports scaling up public and private investment in the clean cooking sector. The Fund will catalyse \$1 billion in investments for the sector, which would support a sizable stream of businesses along the supply chain delivering clean cooking solutions, as well as develop an impact bond market for the clean cooking sector which can attract a broad range of capital. The fund will also complement and support the High-Level Coalition of Leaders for Clean Cooking, Energy, and Health which is being convened by the World Health Organization, UNDP, the United Nations Department of Economic and Social Affairs, and the World Bank under the Health and Energy Platform of Action.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=122 • www.esmap.org/node/71163 | I-7 |
| <p><u>Sustainable Energy for All</u></p> <p>Sustainable Energy for All (SEforALL) is an international organization working with leaders in governments, the private sector and civil society to drive further, faster action towards the achievement of SDG 7, which calls for universal access to sustainable energy by 2030, and the Paris Agreement, which calls for reducing GHG emissions to limit climate warming to below 2°C.</p> <p>Achieving these goals will require a radical rethink of the way we produce, distribute and consume energy. SEforALL is at the heart of this fundamental shift to ensure no one is left behind. Drawing on data and evidence, we identify a critical path to success in achieving Goal 7.</p> | <ul style="list-style-type: none"> • www.seforall.org | I-8 |
| <p><u>International Solar Alliance</u></p> <p>The International Solar Alliance, initiated by India, is an alliance of 122 countries, most of which are solar-resource-rich. The primary objective of the alliance is to work for efficient exploitation of solar energy to reduce dependence on fossil fuels. The alliance is a treaty-based inter-governmental organization. It is action-oriented and member-driven, with a collaborative platform for increased deployment of solar energy technologies to enhance energy security and sustainable development, and to improve access to energy in developing member countries.</p> | <ul style="list-style-type: none"> • www.isolaralliance.org | I-9 |

| Initiative | Further information | Index |
|--|--|-------|
| <p><u>Renewable Energy and Energy Efficiency Partnership</u></p> <p>The Renewable Energy and Energy Efficiency Partnership (REEEP) develops innovative, efficient financing mechanisms to advance market readiness for clean energy services in low- and middle-income countries. It designs and implements tailor-made financing mechanisms, using targeted injections of public funding to build dynamic, sustainable markets and ultimately make clean energy and energy efficiency technology accessible and affordable to all. REEEP invests primarily in disruptive approaches led by SMEs in low- and middle-income countries, facilitating market- and community-led energy transitions.</p> | <ul style="list-style-type: none"> • www.reeep.org/about | I-10 |
| <p><u>IRENA Coalition for Action</u></p> <p>In January 2014, the International Renewable Energy Agency (IRENA) and 35 players in renewable energy from around the world jointly established a Coalition for Action to promote the wider and faster uptake of renewable energy technologies. This key international network discusses industry trends, determines actions, shares knowledge and exchanges best practices with the vision to drive the global energy transition in line with the SDG 7 on affordable and clean energy. The Coalition convenes global dialogue among non-governmental and governmental stakeholders to develop actions to increase the share of renewables in the global energy mix. Today, the Coalition brings together over 100 leading renewable energy players including private sector companies, industry associations, civil society, research institutes and intergovernmental organizations.</p> | <ul style="list-style-type: none"> • https://coalition.irena.org | I-11 |
| <p><u>Clean Cooking Alliance</u></p> <p>The Clean Cooking Alliance works with a global network of partners to build an inclusive industry that makes clean cooking accessible to the 3 billion people who live each day without it. Established in 2010, the Alliance is driving consumer demand, mobilizing investment to build a pipeline of scalable businesses, and fostering an enabling environment that allows the sector to thrive. Achieving universal access to clean cooking solutions requires scaling up a range of technologies and business models. The Alliance's work is built around three core pillars: 1) driving consumer demand for cleaner, more modern stoves and fuels; 2) mobilizing investment; and 3) fostering an enabling environment for industry growth.</p> | <ul style="list-style-type: none"> • www.cleancookingalliance.org | I-12 |

| Initiative | Further information | Index |
|---|---|-------|
| <p><u>NDC Partnership</u></p> <p>In 2015, the world endorsed the Paris Agreement and the 2030 Agenda for Sustainable Development. Nations signaled their commitments to the Paris Agreement through NDCs—each country’s strategy to cut its own GHG emissions and build resilience against the negative effects of a changing climate. The Partnership advances the goals of the Paris Agreement by bringing together countries and institutions in new ways to accelerate NDC implementation and enhance ambition over time. Through a country-driven approach, the Partnership drives climate action and sustainable development while supporting countries in reducing social and economic inequalities. The Partnership responds flexibly to country needs as they evolve, keeping the momentum for strong climate action even in the challenging economic circumstances countries face today.</p> | <ul style="list-style-type: none"> • https://ndcpartnership.org | I-13 |
| <p><u>Accelerating renewable energy transition in SIDS</u></p> <p>SIDS will need support to achieve renewable energy and energy efficiency targets by 2030. Within the framework of the SIDS Lighthouses Initiative, supported by all members of the Alliance of Small Island States and IRENA, additional and enhanced donor commitments will be made to support accelerated collective energy transition in SIDS. The initiative will: 1) ensure operational partnership with CIF to increase access to concessional finance; 2) check-in on projects and funding secured in partnership with Climate Investment Platform to accelerate investments and de-risking of financing; and 3) work with members of the Alliance of Small Island States and IRENA to check up on progress, present timeline for 2030 and partnerships.</p> | <ul style="list-style-type: none"> • https://islands.irena.org and https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=111 | I-14 |
| <p><u>Coalition for Sustainable Energy Access</u></p> <p>The Coalition for Sustainable Energy Access aims to benefit rural, remote and vulnerable areas in developing countries, with special emphasis on LDCs that would have high impact on universal energy access rate via off-grid from solar home systems, mini-grid, on grid expansion, intensification and densification with cooking energy and productive use with the ambition to leave no one behind through mobilizing competitive energy financing.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=128 | I-15 |

| Initiative | Further information | Index |
|---|---|--------------------|
| <p>Task Force for Clean Energy Transition on accelerating energy transition from coal to clean</p> <p>At the Climate Action Summit 2019 an initiative was announced to accelerate energy transition, moving from coal to clean energy, at a global scale, building on ongoing work to ensure the closure of all coal power plants in the United States. The initiative will work with countries around the world to accelerate plans for new clean energy projects. It will bring together public and private sector leaders to share technical expertise and help make the economic case for clean energy. A task force for clean energy transition brought together countries and partners ahead of COP 26 in 2021 through a three-pillared approach: 1) leveraging diplomatic channels; 2) supporting on-the-ground initiatives in key countries; and 3) building capacity in developing countries to develop viable clean energy alternatives to coal.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=98 | <p>I-16</p> |

Further resources to foster climate action for energy transition

A broad landscape of instruments and information is available to foster the energy transition in the Asia-Pacific region. The following is a non-exhaustive list of relevant sources.

- The National Expert SDG Tool for Energy Planning (NEXSTEP) and the Asia Pacific Energy and Resource Modelling Platform: ESCAP is developing NEXSTEP to support the development of national road maps for SDG 7. This tool would enable informed policymaking to support the achievement of Goal 7 and emission reduction targets. The tool comprises three key features: 1) energy and emissions modelling; 2) economic analysis to identify the economically feasible options/interventions; and 3) policy analysis to determine/identify the policies that are feasible for implementation in the national context. Read more at www.unescap.org/our-work/energy/nexstep.
- The Asia Pacific Energy Portal is a platform with the goal to facilitate research, analysis, and informed decision-making within the energy sector in the Asia-Pacific region. It is an open-access information platform, providing data visualizations for an extensive set of energy

statistics, full-text policies and interactive infrastructure maps. The portal offers a collection of more than 200 data sets from global institutions including UNdata, the International Energy Agency, the World Bank, IRENA and Bloomberg. More than 3,000 policy documents have been collected from hundreds of official websites. More than 6,000 power plants have been mapped. With the Portal, ESCAP aims to support research, analysis, and, ultimately, informed decision-making. Access the portal here at <https://asiapacificenergy.org/>.

- With the Energy for sustainable development portal, ESCAP is supporting dialogue and knowledge sharing. This platform supports the implementation of programmes to foster the transition to a sustainable energy system by advancing energy access, renewable energy, and energy efficiency. Access the portal here: <https://www.unescap.org/our-work/energy>
- The ESCAP report “Energy transition in Asia and the Pacific: pathways to ensure access to affordable, reliable, sustainable and modern energy for all” includes an analysis of energy transition pathways for the Asia-Pacific region. It looks at current gaps towards achieving SDG 7 (ensure

access to affordable, reliable, sustainable and modern energy for all) and takes a look at the role of connectivity as a means to close the gaps. Access the publication at www.unescap.org/sites/default/files/APEF2018_2.PDF.

- The report “Policy Perspectives 2019: Sustainable Energy in Asia and the Pacific” provides a snapshot of the energy policy highlights of ESCAP Member States. Read more at www.unescap.org/resources/policy-perspectives-2019-sustainable-energy-asia-and-pacific.
- The United Nations Economic Commission for Europe presents several Energy Transition Toolkits developed by the World Energy Council, the Institute for Advanced Sustainability Studies and the Global Climate Forum. They assist stakeholders in analysing and addressing energy transition challenges. The toolkits are available at www.unece.org/energy/welcome/committee-on-sustainable-energy/committee-on-sustainable-energy/energy-transition-tools.html.
- The Climate Energy Commission of the World Future Council builds capacities among national and local policymakers by facilitating peer-to-peer exchanges and providing access to state-of-the-art knowledge. A specific focus is on synergies between renewable energy and other SDGs. One of their projects is focusing on developing a road map for 100 per cent renewable energy – more information is available at www.worldfuturecouncil.org/climate-energy-and-cities/#roadmap.
- IRENA showcases decarbonization pathways through their Remap programme as well as further knowledge products and tools. These enable countries to increase the share of renewable energy in their power sectors. An overview of their resources is available at <https://www.irena.org/energytransition>.
- The International Energy Agency developed energy transition indicators to capture the complexity of global clean energy transition. An overview of their approach is available at www.iea.org/articles/energy-transitions-indicators.
- A special edition of the annual World Energy Outlook, “Southeast Asia Energy Outlook 2019”, was published by the International Energy Agency. The study highlights the opportunities and risks facing the 10

members of the Association of Southeast Asian Nations (ASEAN) as they look to meet rising energy demand in a secure, affordable and sustainable manner. The publication is available at www.iea.org/reports/southeast-asia-energy-outlook-2019.

- The Renewable Energy Off-grid Explorer is a tool for interactive electrification scenarios that showcases feasible deployment pathways to reach the goal of universal access. The tool is available at www.reog-x.com.

Area 2: Climate Finance and Carbon Pricing

| Initiative | Further information | Index |
|---|--|-------|
| <p><u>Coalition of Finance Ministers for Climate Action</u></p> <p>In April 2019, governments from more than 20 countries launched the Coalition of Finance Ministers for Climate Action, which recognized the challenges posed by climate change. The Coalition will help countries mobilize and align the finance needed to implement their national climate action plans; establish best practices, such as climate budgeting, and strategies for green investment and procurement; and factor climate risks and vulnerabilities into members' economic planning. The work of the Coalition adheres to a set of six aspirational principles (the Helsinki Principles) that promote national climate action, especially through fiscal policy and the use of public finance.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=97 and • www.cape4financeministry.org/coalition_of_finance_ministers • http://pubdocs.worldbank.org/en/600041555089009395/FM-Coalition-Principles-final-v3.pdf | II-1 |
| <p><u>Climate Investment Platform</u></p> <p>The Climate Investment Platform will seek to directly mobilize \$1 trillion in clean energy investment by 2025 in 20 LDCs. The platform will provide a menu of services to governments and private sector clients in their efforts to scale up energy transition and accelerate investments for low carbon, climate-resilient development. It will also enable the delivery of ambitious NDCs.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=119 • www.climateinvestmentplatform.com/ | II-2 |
| <p><u>Net Zero Asset Owner Alliance</u></p> <p>The Net Zero Asset Owner Alliance, a group of the world's largest pension funds and insurers, responsible for directing more than \$2 trillion in investments, is committed to transitioning to carbon neutral investment portfolios by 2050. The members of the Alliance engage with companies in which they are investing to ensure they decarbonize their business models. Their intermediate targets for the 1.5°C scenario include: 1) commitment to full transition of all investment portfolios (more than \$2.4 trillion globally) to net zero by 2050, strong intermediate targets every five years; 2) "recruitment" of more members; and 3) a call for sovereign wealth funds to join this effort.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=96 • www.unepfi.org/net-zero-alliance/ | II-3 |

| Initiative | Further information | Index |
|---|---|-------|
| <p><u>Implement the Recommendations of the Task Force on Climate-Related Financial Disclosures</u></p> <p>The Task Force on Climate-related Financial Disclosures, created by the Financial Stability Board, develops voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers and other stakeholders. The initiative 'Commit to implement the recommendations of the Task Force on Climate-related Financial Disclosures' is an update to the previous We Mean Business coalition initiative 'Commit to report climate change information in mainstream reports as a fiduciary duty'. Under the previous initiative, hundreds of companies became signatories to the statement on fiduciary duty and climate change disclosure, of the Climate Disclosure Standards Board. Signatories agree to report climate change-related information in mainstream corporate reports using international frameworks such as the Climate Disclosure Standards Board Framework for reporting environmental information, natural capital and associated business impacts.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=70 • www.fsb-tcfd.org/ • www.wemeanbusinesscoalition.org/commitment/commit-to-implement-the-recommendations-of-the-tcfd/ | II-4 |
| <p><u>Put a Price on Carbon – Business Leadership Criteria on Carbon Pricing</u></p> <p>A growing group of companies are using an internal carbon price to help manage climate risk and align themselves with the low-carbon transition. By making this commitment, companies are agreeing to align with the United Nations Global Compact's Business Leadership Criteria on Carbon Pricing. This means that they do the following: 1) set an internal carbon price high enough to materially affect investment decisions to drive down GHG emissions; and benchmark against peers; 2) publicly advocate the importance of carbon pricing through policy mechanisms that take into account country specific economies and policy contexts; and the Carbon Pricing Leadership Coalition; and 3) communicate on progress over time on the two criteria above in public corporate reports.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=69# • www.wemeanbusinesscoalition.org/commitment/put-a-price-on-carbon/ • www.unglobalcompact.org/library/1051 | II-5 |
| <p><u>Partnership for Market Readiness</u></p> <p>The Partnership for Market Readiness was launched in 2010 to help establish carbon markets in countries with emerging, developing and transitional economies. The secretariat function is performed by the World Bank. Guided by the needs of the partner countries, the partnership is pursuing various approaches, such as the development of national emissions trading systems or new market instruments (new market mechanisms, CO₂ taxes and national certification standards). The partnership functions both as a dialogue forum for technical exchange and as a trust fund for developing, piloting and implementing new carbon market instruments.</p> | <ul style="list-style-type: none"> • www.thepmr.org/ | II-6 |

| Initiative | Further information | Index |
|---|--|--------------|
| <p><u>Carbon Pricing Leadership Coalition</u></p> <p>The Carbon Pricing Leadership Coalition is a voluntary initiative that catalyses action towards the successful implementation of carbon pricing around the world. The coalition brings together leaders from government, business, civil society and academia to support carbon pricing, share experiences and enhance the global, regional, national and subnational understanding of carbon pricing implementation. The secretariat is administered by the World Bank Group.</p> | <ul style="list-style-type: none"> • www.carbonpricingleadership.org | II-7 |
| <p><u>GCF Readiness Programme</u></p> <p>UNEP, UNDP and the World Resources Institute (WRI) set up the GCF Readiness Programme to support countries in accessing climate finance from GCF. The programme is funded by the International Climate Initiative of the German Ministry for the Environment, Nature Conservation and Nuclear Safety. It consists of 10 support modules based on needs, strategies and priorities identified by each country. These support modules are designed to build capacity in different areas: 1) planning for climate finance at the national level; 2) managing climate finance at the national level; 3) preparing country programmes and project pipelines for GCF support; and 4) monitoring and reporting on climate finance.</p> | <ul style="list-style-type: none"> • www.gcfreadinessprogramme.org/ | II-8 |
| <p><u>GCF Readiness and Preparatory Support Programme</u></p> <p>The GCF itself has set up a Readiness and Preparatory Support Programme, which includes capacity-building measures such as institutional strengthening of national designated authorities, strategic planning (e.g., NAP development), project development or accreditation support for national entities. The readiness support is funded with grants by GCF and implemented in cooperation with delivery partners, which are usually experts or organizations specialized on delivering technical assistance.</p> | <ul style="list-style-type: none"> • www.greenclimate.fund/readiness/process | II-9 |
| <p><u>Readiness Grant Funding</u></p> <p>The Adaptation Fund provides several small grants to help national implementing entities provide peer support to countries seeking accreditation with the Fund and to build capacity for various climate finance readiness activities, including South-South cooperation, project formulation assistance and technical assistance.</p> | <ul style="list-style-type: none"> • www.adaptation-fund.org/apply-funding/grants/ | II-10 |

| Initiative | Further information | Index |
|---|---|-------|
| <p><u>Pilot Program for Climate Resilience</u></p> <p>The CIF features the Pilot Program for Climate Resilience with \$1.2 billion to support some of the most vulnerable countries integrate climate resiliency into strategic development plans. Then it provides funding to implement innovative solutions in the public and private sector.</p> | <ul style="list-style-type: none"> • www.climateinvestmentfunds.org/topics/climate-resilience | II-11 |
| <p><u>Joint Crediting Mechanism</u></p> <p>The Joint Crediting Mechanism facilitates diffusion of leading low-carbon technologies, products, systems, services and infrastructure as well as the implementation of mitigation actions and contributes to the sustainable development of developing countries.</p> <p>In Japan, it appropriately evaluates contributions to GHG emissions reductions or removals in a quantitative manner, by applying measurement, reporting and verification methodologies, and uses them to achieve Japan's emission reduction target.</p> <p>The Joint Crediting Mechanism contributes to the ultimate objective of the UNFCCC by facilitating global actions for GHG emissions reductions or removals and complementing the Clean Development Mechanism.</p> | <ul style="list-style-type: none"> • www.jcm.go.jp/about | II-12 |
| <p><u>The Climate Finance Access Network</u></p> <p>The Climate Finance Access Network (CFAN) aims to support developing countries in securing and structuring finance for climate investments. By cultivating a network of highly trained, embedded climate finance advisors, CFAN will build the capacity of developing countries to more quickly access climate finance and achieve their climate objectives. CFAN will offer services to all developing countries with a focus on Least Developed Countries, Small Island Developing States, and African countries.</p> | <ul style="list-style-type: none"> • https://rmi.org/our-work/areas-of-innovation/climate-finance/climate-finance-access-network/ | II-13 |
| <p><u>Public Expenditure and Financial Accountability</u></p> <p>Public Expenditure and Financial Accountability (PEFA) is a partnership program of the European Commission, the International Monetary Fund, the World Bank, and the governments of France, Luxembourg, Norway, Slovak Republic, Switzerland, and United Kingdom. The PEFA program provides a framework for assessing and reporting on the strengths and weaknesses of public financial management (PFM) using quantitative indicators to measure performance. PEFA is designed to provide a snapshot of PFM performance at specific points in time using a methodology that can be replicated in successive assessments, giving a summary of changes over time.</p> | <ul style="list-style-type: none"> • www.pefa.org/news/pefa-newsflash-april-2020 | II-14 |

| Initiative | Further information | Index |
|--|--|-------|
| <p><u>Adaptation Fund Climate Innovation Accelerator</u></p> <p>The Adaptation Fund has launched a new \$10 million pilot small grants programme, the Adaptation Fund Climate Innovation Accelerator (AFCIA) to foster innovation in adaptation in developing countries at the twenty-fifth Conference of the Parties (COP 25) in Madrid. AFCIA targets a broad range of potential finance recipients, including governments, non-governmental organizations, community groups, young innovators and other groups.</p> | <ul style="list-style-type: none"> • www.ctc-n.org/technical-assistance/adaptation-fund-climate-innovation-accelerator-afcia | II-15 |
| <p><u>Forest Carbon Partnership Facility</u></p> <p>The Forest Carbon Partnership Facility (FCPF) is a global partnership of governments, businesses, civil society and indigenous peoples focused on reducing emissions from deforestation and forest degradation (REDD+), forest carbon stock conservation, the sustainable management of forests, and the enhancement of forest carbon stocks in developing countries.</p> | <ul style="list-style-type: none"> • www.forestcarbonpartnership.org/ | II-16 |
| <p><u>Private Financing Advisory Network</u></p> <p>As technology prices continue to fall, clean energy projects become more profitable and the appetite of investors for such projects grows. Now is a time of enormous potential for the development of clean energy capacity around the world and many entrepreneurs have great ideas for clean energy and climate adaptation projects that are economically viable. However, especially in low- and middle-income countries, the projects and the investment tend to have difficulty finding each other: entrepreneurs may lack the connections to find investment or may be unsure of what investors look for in a business plan. Investors may find it difficult to assess investment opportunities in markets they are not familiar with.</p> <p>The Private Financing Advisory Network (PFAN) bridges this gap by helping entrepreneurs build their businesses and present them in a language which investors will understand and be interested in. PFAN also helps investors find and recognize the potential of these businesses.</p> | <ul style="list-style-type: none"> • https://pfan.net/about-pfan/ | II-17 |

Further resources on fostering climate action through climate finance and carbon pricing

A broad landscape of instruments and information is available to support climate finance and carbon pricing activities in the Asia-Pacific region. The following is a non-exhaustive list of relevant sources.

- ADB launched a technical assistance platform named NDC Advance: Accelerating Climate Actions in Asia and the Pacific. It aims to help developing member countries of ADB to mobilize finance, build capacity and provide knowledge and other support needed to implement NDCs. Under this initiative, three separate, but strategically-linked priorities were identified to respond to a range of needs in developing member countries. It will: 1) assist developing member countries in refining and enhancing their ambition as well as translating NDCs into climate investment plans; 2) improve the access of developing member countries to external public and private actors supporting the use of innovative finance mechanisms; and 3) develop methods and tools to measure, monitor and report on commitments made under NDCs. See www.adb.org/publications/ndc-advance-flyer
- The financial mechanism to the UNFCCC, also serving the Paris Agreement, includes GEF, the Adaptation Fund and GCF. All these multilateral investment funds channel climate finance from developed to developing countries, with significant investments in the Asia-Pacific region. GEF (www.thegef.org/), Adaptation Fund (www.adaptation-fund.org/), GCF (www.greenclimate.fund/)
- The Climate Public Expenditures and Institutional Review (CPEIR) is a systematic qualitative and quantitative analysis of a country's public expenditures and how they relate to climate change – a method, which could gain importance in the light of designing NDC investment plans. Since 2011, CPEIRs have been conducted in many countries in Asia-Pacific, including Bangladesh, Cambodia, Indonesia, Nepal, Philippines, Samoa, Thailand and Viet Nam. The analyses have been led by relevant government agencies, with technical assistance from UNDP as well as other development partners. See www.climatefinance-developmenteffectiveness.org/about/what-cpeir.
- The Climate Investment Funds Knowledge Center is a collection of reports, tools, case studies, fact sheets, investment plans, learning events, and other policy guidelines to assist policymakers in NDC implementation. The database includes country-specific reports and resources, case studies, fact sheets, investment plans, guidelines and reports, as well as information on the Clean Technology Fund, the Forest Investment Program, the Pilot Program for Climate Resilience, and resources on how to scale up renewable energy programmes in low-income countries. See www.climateinvestmentfunds.org/knowledge-center.
- The UNEP Finance Initiative mobilizes private sector finance for sustainable development. The initiative works with more than 300 members – banks, insurers and investors – and over 100 supporting institutions to support the development and implementation of global finance sector principles (e.g., Principles for Responsible Banking, Principles for Sustainable Insurance, Principles for Responsible Investment). See www.unepfi.org/.
- The ESCAP MPFD Policy Brief No. 107: Raising the level of ambition on carbon pricing in Asia and the Pacific is available from www.unescap.org/resources/mpfd-policy-brief-no-107-raising-level-ambition-carbon-pricing-asia-and-pacific.
- The World Bank's Carbon Pricing Portal offers information on carbon pricing activities of the bank. See www.worldbank.org/en/programs/pricing-carbon.
- The World Bank report "State and Trends of Carbon Pricing 2019" is available from <https://openknowledge.worldbank.org/bitstream/handle/10986/31755/9781464814358.pdf?sequence=8&isAllowed=y>.
- The Forest Carbon Partnership Facility (FCPF) of the World Bank supports efforts to reduce emissions from deforestation and forest

degradation through its Readiness and Carbon Funds is available on See www.forestcarbonpartnership.org/.

- The International Carbon Action Partnership is an international forum for governments and public authorities that have implemented or are planning to implement emissions trading systems. See <https://icapcarbonaction.com/en/>.
- The NDC Partnership set up a comprehensive Climate Finance Explorer, which can be filtered by region. See <https://ndcpartnership.org/climate-finance-explorer>.
- A similar approach has been taken by the Organisation of Economic Co-operation and Development (OECD), which designed the Climate Fund Inventory, a qualitative database of bilateral and multilateral public climate funds. See www.oecd.org/environment/cc/database-climate-fund-inventory.htm.

- The Climate Finance Advisory Service offers negotiators, policymakers and advisors in the poorest and most climate vulnerable countries bespoke information and guidance to help them effectively participate in complex global climate finance negotiations. See www.cfas.info/en.

Area 3: Industry Transition

| Initiative | Further information | Index |
|--|--|-------|
| <p><u>Leadership Group for Industry Transition</u></p> <p>At the Climate Action Summit in 2019, an initiative was launched to direct the world's heaviest GHG emitting industries towards a low-carbon economy. Governments of India and Sweden together with Argentina, Finland, France, Germany, Ireland, Luxembourg, the Netherlands, the Republic of Korea and the United Kingdom, and companies including Dalmia Cement, DSM, Heathrow Airport, LKAB, Mahindra Group, Royal Schiphol Group, Scania, SpiceJet, SSAB, ThyssenKrupp and Vattenfall announced a new leadership group to drive change in hard-to-decarbonize and energy-intensive industry sectors. This global initiative is supported by, among others, the World Economic Forum, the Energy Transition Commission, Mission Innovation, SEI and the European Climate Foundation in ambitious public-private efforts to ensure that heavy industries and mobility companies can find them a viable way to implement the Paris Agreement.*</p> <p>* https://www.un.org/en/climatechange/assets/pdf/release_industry_transition.pdf</p> | <ul style="list-style-type: none"> • www.un.org/en/climatechange/assets/pdf/release_industry_transition.pdf • www.government.se/articles/2019/10/sweden-and-india-are-taking-the-lead-to-transform-the-heavy-industry-sector-towards-a-fossil-free-future/ • www.un.org/en/climatechange/assets/pdf/cas_report_11_dec.pdf | III-1 |

| Initiative | Further information | Index |
|--|---|-------|
| <p><u>Decarbonising Shipping – Getting to Zero Coalition</u></p> <p>The Getting to Zero Coalition is a partnership between the World Economic Forum, Global Maritime Forum and Friends of Ocean Action. It builds on the call for action to support decarbonization, launched in October 2018 and signed by more than 70 leading representatives of the maritime industry, financial institutions and other stakeholders, as well as on the Poseidon Principles, a global framework for climate-aligned ship financing. The Getting to Zero Coalition brings together decision-makers from the entire shipping value chain with important interest groups from the energy sector as well as from governments and Intergovernmental organizations. The work is supported by knowledge partners such as the Environmental Defense Fund, UCL Energy Institute, and the Energy Transitions Commission.</p> | <ul style="list-style-type: none"> • www.globalmaritimeforum.org/getting-to-zero-coalition • http://climateinitiativesplatform.org/index.php/Decarbonizing_Shipping:_Getting_to_Zero_Coalition | III-2 |
| <p><u>Just Transition and Decent Jobs Pledge from the private sector</u></p> <p>Ten large companies in the energy and industrial sectors, including the world's largest developers of renewable energies, are committed to ensuring that new jobs in low-emissions sectors are fair, decent and inclusive. They have committed to comply with the following standards regarding their own employees and only use contractors who also comply with these standards:</p> <ul style="list-style-type: none"> • Social dialogue with workers and their labour unions. • Workers' rights, including the core labour standards and occupational health and safety standards of the International Labour Organization. • Social protection, including pension and health. • Wage guarantees, including applicable wage rates for skilled workers in the relevant industries. <p>In addition, the 10 largest companies have also committed to help their national governments support a just ecological transition by formulating national just transition plans and decent jobs.*</p> <p>*United Nations (2019): Report of the Secretary-General on the 2019 Climate Action Summit and the Way Forward, p. 28.</p> | <ul style="list-style-type: none"> • https://bteam.org/our-thinking/news/just-transition-pledge | III-3 |

| Initiative | Further information | Index |
|---|---|-------|
| <p><u>Clean Air Initiative</u></p> <p>The aim of the initiative is to simultaneously mitigate climate change, reduce air pollution and promote health in a comprehensive manner. The initiative will provide an opportunity for new commitments and investments in interventions for climate-resistant health systems and in air quality monitoring and policy implementation. The Clean Air Initiative was developed as part of the Summit's Social and Political Drivers Action Area, which is led by the World Health Organization, the Governments of Peru and Spain, the United Nations Department of Economic and Social Affairs and the International Labour Organization. The coalition aims to improve people's health, reduce inequalities, promote social justice and maximize opportunities for decent work for all while protecting the climate for future generations.*</p> <p>*International Institute for Sustainable Development (2019): Clean Air Initiative Announced Ahead of UN Climate Action Summit. URL: https://sdg.iisd.org/news/clean-air-initiative-announced-ahead-of-un-climate-action-summit/</p> | <ul style="list-style-type: none"> • www.un.org/sustainabledevelopment/blog/2019/07/clean-air-initiative-calls-climate-action/ | III-4 |
| <p><u>Nitric Acid Climate Action Group</u></p> <p>The Nitric Acid Climate Action Group (NACAG) initiative aims to assure global abatement of N₂O emissions from nitric acid production. Its vision is to incentivise the installation of appropriate abatement technologies in all nitric acid production plants worldwide. The initiative provides all governments and plant operators with guidance and information on technological and regulatory issues regarding N₂O abatement. Moreover, NACAG makes available financial support for the installation and operation of abatement technology.</p> | <ul style="list-style-type: none"> • www.nitricacidaction.org | III-5 |
| <p><u>Business Ambition for 1.5°C – Our Only Future</u></p> <p>Business Ambition for 1.5°C is an urgent call to action, led by a global coalition of United Nations agencies, business and industry leaders. Companies are encouraged to commit to ambitious emissions reduction targets as part of the Science Based Targets initiative. By setting a scientifically sound goal in line with a future of 1.5°C, companies can make their critical and necessary contribution to limiting the worst effects of climate change. To date, 208 companies with a market capitalization of over \$3.6 trillion have replied to the open letter and declared their business ambition for 1.5°C.</p> | <ul style="list-style-type: none"> • www.unglobalcompact.org/take-action/events/climate-action-summit-2019/business-ambition • https://sciencebasedtargets.org/business-ambition-for-1-5c-3/ | III-6 |

| Initiative | Further information | Index |
|--|--|-------|
| <p><u>Climate Action 100+</u></p> <p>Climate Action 100+ is a five-year initiative led by investors to involve systemically important greenhouse gas emitters and other companies across the global economy that have significant opportunities to drive the clean energy transition and to help achieve the Paris Agreement goals. Together, they manage over \$35 trillion in assets. Investors are calling on companies to improve governance on climate change, curb emissions and strengthen climate-related financial disclosures.</p> | <ul style="list-style-type: none"> • www.climateaction100.org/ | III-7 |
| <p><u>Low Carbon Technology Partnerships initiative</u></p> <p>The Low Carbon Technology Partnerships initiative (LCTPi) consists of over 160 companies and 70 partners committed to accelerating the transition to a low-carbon economy. LCTPi is led by the World Business Council for Sustainable Development and supported by We Mean Business partners. It provides businesses and policymakers with a collaborative platform to scale the delivery of business solutions to levels and speeds that are compatible with limiting global warming to a lower 2°C. Taken together, LCTPi efforts could deliver 65 per cent of the emissions reductions needed to remain under the 2°C limit while channelling \$5 trillion-\$10 trillion of investment toward low carbon sectors of the economy and support 20 million-45 million person-years of employment.</p> | <ul style="list-style-type: none"> • www.wbcsd.org/Programs/Climate-and-Energy/Climate/Low-Carbon-Technology-Partnerships-initiative | III-8 |
| <p><u>We Mean Business coalition</u></p> <p>The We Mean Business coalition is a prominent example for a coalition of interest groups that encourages private companies to take action against climate change, achieve net zero carbon dioxide emissions and encourage governments to adopt environmental policies. So far, over 1,000 of the world's most influential businesses and investors representing almost \$25 trillion in market capitalisation have joined the coalition. They all see lucrative business opportunities in the measures proposed in the Paris Agreement and intend to build an effective platform for sustained ambition and innovation.</p> | <ul style="list-style-type: none"> • www.wemeanbusinesscoalition.org/ | III-9 |

Further information on fostering climate action through industry transition

Besides the above-mentioned initiatives and the pledges many other initiatives, tools and information can help to steer the industry in the Asia-Pacific region on a low-carbon path. The following list includes further relevant resources that can support industry transition in the Asia-Pacific region.

- The 2050 Pathways Platform is an initiative that was launched in Marrakech at COP 22 to support countries, states, regions, cities and companies seeking to devise long-term pathways for net zero GHG, climate resilience and sustainable development. See www.2050pathways.org/resources/2050-pathways-handbook/.
- Horizon to Horizon is a guide to creating long term, economy-wide strategies for Pacific Island countries. It was developed in close consultation with stakeholders from across the Pacific. It explores how to create long-term resilience, net zero emissions development and a sustainable future. Read the guide at www.climateworksaustralia.org/resource/horizon-to-horizon/.
- The Horizon to Horizon guide is accompanied by a Strategic Mitigation, Adaptation and Resilience Tool (SMART). It has been designed to help Pacific Island leaders identify and better understand interactions between mitigation actions and adaptation and resilience priorities. Download the Excel-based tool at www.climateworksaustralia.org/resource/smart-tool/.
- OECD published a report called “Regions in Industrial Transition”, which offers guidance on how to manage industrial transition. It is directed towards all policymakers seeking to improve the “what” and “how” of policies that promote industrial change. See www.oecd-ilibrary.org/urban-rural-and-regional-development/regions-in-industrial-transition_c76ec2a1-en.
- At COP 23, the International Labour Organization published a report on “Just Transition, Decent Work and Climate Resilience” with a regional focus on Asia-Pacific. See www.ilo.org/wcmsp5/groups/public/-dgreports/---dcomm/documents/publication/wcms_589098.pdf.
- ESCAP compiled a report titled “China’s economic transformation: Impacts on Asia and the Pacific”, which discusses China’s economic outlook up to 2030 if the Government focuses on different economic, social and environmental priorities. See www.unescap.org/sites/default/files/China%27s%20economic%20transformation_impacts%20on%20Asia%20and%20the%20Pacific.pdf.
- OECD set up a list of recommendations for “Industrial upgrading for green growth in China”. See www.oecd.org/greengrowth/Industrial_Upgrading_China_June_2017.pdf
- The World Bank Group published a report on “Innovative China. New drivers of growth”, which highlights China’s success in innovation towards a new pathway of economic growth. See <https://openknowledge.worldbank.org/bitstream/handle/10986/32351/9781464813351.pdf?sequence=7&isAllowed=y>.

Area 4: Nature-based Solutions

| Initiative | Further information | Index |
|--|---|-------|
| <p><u>UN-REDD Programme 2020-2030</u></p> <p>The United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation (or UN-REDD Programme) is a collaborative programme of the Food and Agriculture Organization of the United Nations, UNDP and UNEP, created in 2008. It supports nationally led REDD+ processes and promotes the informed and meaningful involvement of all stakeholders, including indigenous peoples and other forest-dependent communities, in national and international REDD+ implementation. This programme is ready to scale up the capacity of forests as they contribute to capturing 10-12 gigatons of atmospheric carbon dioxide each year.</p> | <ul style="list-style-type: none"> • www.un-redd.org/ | IV-1 |
| <p><u>Accelerating action within the food system</u></p> <p>Accelerating action within the food system is led by New Zealand, the Global Research Alliance on Agricultural Greenhouse Gases and its partners. It seeks to strengthen the ability of countries to monitor agricultural greenhouse gases so that they can accelerate the development of mitigation strategies, improve transparency, gain greater access to climate finance, and improve the climate benefits resulting from development and other investments.</p> | <ul style="list-style-type: none"> • https://wedocs.unep.org/bitstream/handle/20.500.11822/28798/NZNBS.pdf?sequence=1&isAllowed=y | IV-2 |
| <p><u>The Group of Friends for Nature-Based Solutions</u></p> <p>The Group of Friends for Nature-Based Solutions was proposed by the Nature-Based Solutions for Climate Manifesto and established after the Climate Action Summit in September 2019. It will facilitate cooperation among governments and non-state actors in order to foster the growth of a broad movement for nature-based solutions. It will be led by China.</p> | <ul style="list-style-type: none"> • www.unglobalcompact.org/take-action/events/climate-action-summit-2019/nature-based-solutions | IV-3 |
| <p><u>Just Rural Transition</u></p> <p>Just Rural Transition aims to scale up nature-based solutions for resilience. It focuses on strengthening the resilience of people's livelihoods, especially of small-scale food producers. It also prioritises the protection of the vital natural systems that sustain life in localities affected by climate change. It is proposed by the Climate Action Summit Adaptation and Resilience Coalition [co-leads are Egypt and the United Kingdom], the Global Commission on Adaptation and the Food and Land Use Coalition.</p> | <ul style="list-style-type: none"> • www.foodandlandusecoalition.org/global-initiatives/jrt/ | IV-4 |

| Initiative | Further information | Index |
|---|--|-------|
| <p><u>Natural Climate Solutions Alliance</u></p> <p>Natural Climate Solutions Alliance seeks to mobilize the resources needed for nature-based solutions to contribute fully to achieving the ambition of the Paris Agreement and SDGs. The resources would be used to tackle the most pressing environmental and social challenges, biodiversity and forest loss, sustainable water management and sustainable community livelihoods. The initiative to establish this alliance is being advanced by businesses and NGOs: the entities that back it have committed to scaling up financial resources to deliver nature-based solutions with integrity at scale. The development of the alliance involves the World Economic Forum, the World Business Council on Sustainable Development, Nature4Climate, the Nature Conservancy, Conservation International, Climate Advisers and the Wildlife Conservation Society.</p> | <ul style="list-style-type: none"> • www.weforum.org/natural-climate-solutions-alliance | IV-5 |
| <p><u>Campaign for Nature</u></p> <p>The global Campaign for Nature is a coalition of scientists, government leaders, NGOs and businesses under the lead of the Secretariat of the Convention on Biological Diversity, closely collaborating with UNEP. The coalition contribute to the Paris Agreement's goals by committing to conserve 30 per cent of the Earth land and ocean by 2030 through nature-based solutions. Therefore, they aim to create and expand ecosystem protection areas, restore degraded ecosystems and enhance NDCs by including nature-based solutions and by supporting funding.</p> | <ul style="list-style-type: none"> • www.campaignfornature.org/ | IV-6 |
| <p><u>Governors' Climate and Forests Task Force</u></p> <p>Under the lead of the University of Colorado, Boulder, 38 states and provinces across Latin America, the Caribbean, South-East Asia and West Africa collaborate on a subnational level to protect tropical forests, reduce emissions from deforestation and forest degradation and promote realistic pathways to rural development that maintains forests. They seek to empower a coalition of subnational jurisdictions, as well as civil society and private sector partners to implement innovative jurisdiction-wide programmes for sustainable low-emissions development built upon improved forest governance and novel technical and financial mechanisms. Furthermore, the Governors' Climate and Forests Task Force enhances opportunities for local communities and indigenous peoples.</p> | <ul style="list-style-type: none"> • www.gcftf.org/ | IV-7 |

| Initiative | Further information | Index |
|--|--|-------|
| <p><u>High-Level Panel for Sustainable Ocean Economy</u></p> <p>The 14 members of the High-Level Panel for a Sustainable Ocean Economy are Australia, Canada, Chile, Fiji, Ghana, Indonesia, Jamaica, Japan, Kenya, Mexico, Namibia, Norway, Portugal and Palau, representing approximately 30 per cent of the world's coastlines, 30 per cent of the world's exclusive economic zones, 20 per cent of the world's ocean catch, and 20 per cent of the world's shipping fleet. Members committed to invest in nature-based solutions by restoring, protecting and managing coastal and marine ecosystems and by harnessing ocean-based renewable energy by scaling up offshore and ocean-based renewable energy. Additionally, they committed to decarbonize ocean industries and to increase investments in solutions to decarbonize shipping and marine transport, port infrastructure and operations, fisheries, aquaculture and tourism, as well as advancing the deployment of carbon capture and storage.</p> | <ul style="list-style-type: none"> • www.oceanpanel.org/about-the-panel | IV-8 |
| <p><u>Resilient Asian Deltas Initiative</u></p> <p>The World Wide Fund for Nature initiative seeks to stop Asia's six largest delta systems from sinking and shrinking. In specific, the Ganges-Meghna-Brahmaputra, Indus, Irrawaddy, Mekong, Pearl and Yangtze. Therefore, the initiative aims to reduce barriers, respond to opportunities and scale up solutions that will transform attitudes and approaches to defending deltas through political and financial investments.</p> | <ul style="list-style-type: none"> • https://wwf.panda.org/our_work/water/freshwater_initiatives/resilient_asian_deltas_initiative/ | IV-9 |
| <p><u>Remove Commodity-driven Deforestation</u></p> <p>Started in 2015, Remove Commodity-driven Deforestation seeks to convince companies to remove commodity-driven deforestation from their supply chains, to combat a significant source of emissions and to make their supply chains more sustainable and resilient. Under the lead of CDP companies develop how commodities as, soy, palm oil, beef, timber and pulp can be sustainably produced.</p> | <ul style="list-style-type: none"> • www.wemeanbusinesscoalition.org/commitment/remove-commodity-driven-deforestation-from-all-supply-chains-by-2020/ | IV-10 |
| <p><u>IUCN Global Standard for Nature-based Solutions</u></p> <p>IUCN developed standards for nature-based solutions so that they reach their potential to address societal challenges. The standards are developed for use by governments, businesses, investors, communities and NGOs.</p> | <ul style="list-style-type: none"> • www.iucn.org/theme/ecosystem-management/our-work/iucn-global-standard-nature-based-solutions | IV-11 |

Further resources on fostering climate action through nature-based solutions

The following is a non-exhaustive list of relevant sources to enable and support nature-based solutions for mitigation and adaptation purposes.

- The UNEP nature-based solutions contributions platform is available at www.unenvironment.org/nbs-contributions-platform.
- The Ocean Cities of the Pacific Islands published a policy brief on 'Re-Naturing Urbanization'. It gives a short and illustrative view on nature-based solutions for the protection of ecosystems, especially coastal zones. It contains a Fiji case study on building resilience through natural infrastructure solutions. See www.unescap.org/sites/default/files/Ocean%20Cities%20of%20the%20Pacific%20Islands_PB3_UNESCAP_USP_0.pdf.
- The Compendium of Contributions - Nature- Based Solutions was published by the Climate Action Summit in 2019. It provides over 100 initiatives and examples of best practices. See https://wedocs.unep.org/bitstream/handle/20.500.11822/29988/Compendium_NBS.pdf?sequence=1&isAllowed=y.
- The report 'Helping nature help us - Transforming disaster risk reduction through ecosystem management', published by IUCN, provides a better understanding the connection between ecosystem management and disaster risks. See www.iucn.org/sites/dev/files/content/documents/helping_nature_help_us_-_transforming_disaster_risk_reduction_through_ecosystem_management.pdf.
- IUCN recently presented a study on nature-based solutions in NDCs and how they can contribute to ambition raising. See www.iucn.org/theme/climate-change/resources/key-publications/strengthening-nature-based-solutions-national-climate-commitments.
- IUCN is leading international standardizations efforts for nature-based solutions, and it provides an overview of this process on its website. See www.iucn.org/commissions/commission-ecosystem-management/our-work/nature-based-solutions.

Area 5: Cities and Local Action

| Initiative | Further information | Index |
|---|---|------------|
| <p><u>Action Towards Climate Friendly Transport</u></p> <p>Under this initiative a global coalition of over 100 entities committed to accelerate the decarbonization of the transport sector and aims to catalyse transport as an enabler of sustainable development in line with the 2030 Agenda and the Paris Agreement. The initiative has four components: 1) prioritise breathable and walkable streets through urban planning; 2) strengthen public transport's role as the backbone of all mobility services; 3) guarantee financial incentives and a regulatory framework for an emission transition; and 4) ensure clean energy sources are accessible to further reduce the carbon footprint. The implementation of this initiative will be led by UN-Habitat. Following the establishment of a pathway to action by the end of 2020, the focus will be on capacity-building and implementation of the four components with designated lead institutions and countries for each component.</p> | <ul style="list-style-type: none"> • http://oneplanet.uitp.org/manifesto/climate-action-manifesto/ | V-1 |
| <p><u>Zero Carbon Buildings for All</u></p> <p>Zero Carbon Buildings for All is a multi-partner global initiative endorsed by the United Nations Secretary-General and launched at the Climate Action Summit in September 2019. The initiative will leverage the leadership of government, industry and civil society to secure commitments from two audiences: national and local leaders, to develop and implement policies to drive decarbonization of all new buildings by 2030 and all existing buildings by 2050; and financial and industry partners, to provide expert input and commit \$1 trillion of market action by 2030. This joint initiative represents a step change in the ambition of policymakers, advocates and the private sector.</p> | <ul style="list-style-type: none"> • https://wrirosscities.org/ZeroCarbonBuildings | V-2 |
| <p><u>Building Climate Resilience for the Urban Poor</u></p> <p>This initiative aims to help 150 million urban poor to adapt to climate change in informal settlements by 2023 and build climate resilience of 600 million vulnerable people by 2030. To reach these goals, partners aim to mobilize \$15.2 billion over a first phase for four years, ultimately scaling up the financing to \$60.8 billion by 2030, from a variety of sources.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=116 | V-3 |

| Initiative | Further information | Index |
|--|---|------------|
| <p><u>Leadership for Urban Climate Investment</u></p> <p>The objectives of Leadership for Urban Climate Investment (LUCI) is to scale-up and leverage climate finance for cities. More specifically, it aims to strengthen the capacity of 2000 cities in project preparation by 2030, to link 1,000 climate-smart urban projects to finance by 2025 and to enable 100 climate-smart urban projects to use new financing mechanisms by 2025.</p> <p>The initiative seeks to encompass the entire value chain of climate friendly and resilient urban infrastructure projects, focusing on four components from early-stage project preparation via financing to tracking finance flows and their impact. The objective is to close existing gaps in the subnational finance architecture through the creation of a strong global architecture for subnational climate finance and its tracking, the creation of bankable projects and coherent pipelines at scale, by launching the Cities Climate Finance Gap Fund to increase funding for early-stage project preparation, by improving financing options and approaches for cities and urban infrastructure projects, and through strengthening capacity and engagement of subnational and national development banks.</p> <p>The City Climate Finance Gap Fund (target: €100 million grant funding to unlock a pipeline of more than €4 billion) will aim to dramatically increase funding for early-stage preparation.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=115 | V-4 |
| <p><u>C40 Cities Climate Leadership Group</u></p> <p>The C40 Cities Climate Leadership Group connects 94 of the world's greatest cities to take bold climate action, leading the way towards a healthier and more sustainable future. Representing 700+ million citizens and one quarter of the global economy, mayors of the C40 cities are committed to delivering on the most ambitious goals of the Paris Agreement at the local level. Created and led by cities, C40 is focused on tackling climate change and driving urban action that reduces greenhouse gas emissions and climate risks, while increasing the health, wellbeing and economic opportunities of urban citizens. C40 is governed by a Steering Committee made up of C40 member city mayors, elected by their peers to represent the geographic diversity of the network. In addition to formal peer-to-peer networks, C40 also offers member cities additional services through its programme model. Programmes range from localized direct support, to improved access to data, to broad-based partnered efforts around finance, city diplomacy, and inclusive climate action.</p> | <ul style="list-style-type: none"> • www.c40.org | V-5 |
| <p><u>The Carbon Neutral Cities Alliance</u></p> <p>The Carbon Neutral Cities Alliance aims to support leading international cities to achieve deep GHG emissions reductions.</p> | <ul style="list-style-type: none"> • https://carbonneutralcities.org/ | V-6 |

| Initiative | Further information | Index |
|---|---|-------------|
| <p><u>Cities Climate Finance Leadership Alliance</u></p> <p>The Cities Climate Finance Leadership Alliance is a multilevel and multi-stakeholder coalition aimed at closing the investment gap for urban subnational climate projects and infrastructure.</p> | <ul style="list-style-type: none"> • www.citiesclimatefinance.org/resources/ | V-7 |
| <p><u>Urban-LEDS project</u></p> <p>The Urban-LEDS project addresses integrated low-emission and resilient development in more than 60 cities, including in the following Asian countries: Bangladesh, India, Indonesia and the Lao People's Democratic Republic. In addition, 16 European cities act as source cities and support peer-to-peer exchange and cooperation.</p> | <ul style="list-style-type: none"> • www.urban-leds.org | V-8 |
| <p><u>Transformative Actions Program</u></p> <p>The Transformative Actions Program aims to raise local and regional climate ambitions as well as to accelerate the implementation of transformative local climate actions.</p> | <ul style="list-style-type: none"> • http://tap-potential.org/ | V-9 |
| <p><u>SLOCAT Partnership on Sustainable, Low Carbon Transport</u></p> <p>The SLOCAT Partnership is an international multi-stakeholder partnership that enables collaborative knowledge and action for sustainable, low carbon transport.</p> | <ul style="list-style-type: none"> • https://slocat.net | V-10 |
| <p><u>EcoMobility Alliance</u></p> <p>The EcoMobility Alliance is a network of ambitious cities that reinforces the local governments' commitments to the SDGs by transforming transportation systems and reconfiguring mobility patterns, and focusing on integrated urban planning, improving health and quality of life, reducing dependency on private automobiles and applying sustainability principles in passenger and freight mobility.</p> | <ul style="list-style-type: none"> • https://ecomobility.org/ecomobility-alliance/ | V-11 |
| <p><u>Planners for Climate Action</u></p> <p>The initiative Planners for Climate Action aims to catalyse and accelerate climate action through responsible and transformative urban and regional planning practice, education and research.</p> | <ul style="list-style-type: none"> • www.planners4climate.org/ | V-12 |

| Initiative | Further information | Index |
|---|--|-------------|
| <p><u>Global Covenant of Mayors for Climate and Energy</u></p> <p>The Global Covenant of Mayors for Climate and Energy is the largest global alliance of cities and local governments supporting actions for the Paris Agreement. The alliance is made of more than 10,000 cities, representing 800 million people. The core initiatives focus on data-based solutions (Data4Cities), research and innovation (Innovate4Cities), and city climate finance (Invest4Cities).</p> | <ul style="list-style-type: none"> • www.globalcovenantofmayors.org | V-13 |
| <p><u>Urban Financing Partnership Facility</u></p> <p>The facility was established by ADB in November 2009 for investment co-financing and technical assistance for urban environment infrastructure that benefits the poor. It is comprised of the following:</p> <ul style="list-style-type: none"> • Urban Climate Change Resilience Trust Fund (multi-partner trust fund) • Urban Environmental Infrastructure Fund (single-partner trust fund) • Cities Development Initiative for Asia (multi-partner trust fund) • ASEAN Australia Smart Cities Trust Fund (single-partner trust fund) <p>The aim of the facility is to raise and use development partner funds for investment co-financing in urban environmental infrastructure projects and support a wide range of technical assistance to help lay the groundwork for such projects.</p> | <ul style="list-style-type: none"> • www.adb.org/documents/series/urban-financing-partnership-facility-annual-reports | V-14 |
| <p><u>City Climate Finance Gap Fund</u></p> <p>The City Climate Finance Gap Fund (Gap Fund) supports climate-smart urban planning and early stage project preparation. Accordingly, it provides advisory and technical assistance support. While the Gap Fund may help identify further sources of funding for later project cycle stages, it is not designed to finance investments directly. The Gap Fund provides a range of technical assistance and capacity-building to support climate-smart planning and investment in cities in developing and emerging countries.</p> | <ul style="list-style-type: none"> • www.citygapfund.org/what-we-offer | V-15 |

Further resources on fostering climate action in cities and for local action

Given the relevance of subnational climate action, there are many activities to foster local action. The following is a non-exhaustive list of selected relevant sources.

- The ESCAP report “The Future of Asian and Pacific Cities 2019” makes the case for four priorities and four approaches to realize a sustainable urban future in Asia and the Pacific. See www.unescap.org/publications/future-asian-and-pacific-cities-2019-transformative-pathways-towards-sustainable-urban.
- The Compact of Mayors has released its 2019 report on the impact of cities on the climate emergency. See www.globalcovenantofmayors.org/impact2019/.
- The Global Alliance for Buildings and Construction has published a guide for incorporating buildings actions in NDCs. See https://globalabc.org/sites/default/files/2020-03/GABC-NDC-GUIDE_ENGLISH.pdf.
- The network of ICLEI Local Governments for Sustainability has dedicated regional websites for East Asia (<http://eastasia.iclei.org>), South-East Asia (<https://icleiseas.org>), South Asia (<http://southasia.iclei.org>) and Oceania (www.icleioceania.org) with information on regional activities.
- The Urban SDG Platform is available at www.urbansdgplatform.org/index.msc.

Area 6: Resilience and Adaptation

| Initiative | Further information | Index |
|---|---|-------|
| <p><u>Resilience and Adaptation Call for Action</u></p> <p>The Resilience and Adaptation Call for Action was launched by Bangladesh, Egypt, Malawi, the Netherlands, Saint Lucia and the United Kingdom, and supported by UNDP. It sets out the following commitments: 1) act now to respond to immediate climate impacts and to support the most vulnerable members of society; 2) build resilient futures by putting climate risk at the center of decision-making; and 3) urgently increase the availability of adaptation and resilience finance. So far 118 member states and self-governing territories, 16 United Nations institutions and international finance institutions, as well as 70 other organizations have endorsed the Resilience and Adaptation Call for Action.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=108 and • www.adaptation-undp.org/sites/default/files/uploaded-images/call_for_action_on_adaptation_and_resilience_v_14_apr_2020.pdf | VI-1 |

| Initiative | Further information | Index |
|--|--|-------|
| <p><u>Coalition for Climate Resilient Investment</u></p> <p>The Coalition for Climate Resilient Investments (CCRI) aims to transform infrastructure investment by integrating climate risks into decision-making, driving a shift towards a more climate resilient economy for all countries, including the most vulnerable. Building the economic and financial case for climate resilient investments will mobilize capital into resilient infrastructure and foster a more resilient financial industry. Planned outcomes are a strengthened market for private and public sector investment in climate resilient infrastructure, reduced climate risk resulting from a shift in the flow of investment towards climate resilient infrastructure, support for climate vulnerable geographies to attract investment and prevent capital flight as climate risks become more evident. CCRI is led by Jamaica and the United Kingdom as well as Willis Towers Watson, the World Economic Forum and the Global Commission on Adaptation.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=109 • https://sdg.iisd.org/news/private-sector-coalition-seeks-to-future-proof-infrastructure-investments/ • www.adaptation-undp.org/sites/default/files/uploaded-images/coalition_for_climate_resilient_investment_cas_launch_.pdf | VI-2 |
| <p><u>Risk-Informed Early Action Partnership</u></p> <p>The Risk-Informed Early Action Partnership (REAP) strives to make 1 billion people safer from disaster by 2025 by delivering new and improved early warning systems and helping communities prepare the plans and resources needed to respond when disaster strikes. The partnership will bring together major players, leverage increased financial commitments, improve the way money is spent and aggregate and monitor targets across national and global frameworks, early warning systems, domestic capacity-building and early action. Finland, the United Kingdom and other countries and international organizations, including the International Federation of the Red Cross and Red Crescent, are committed to support the initiative. So far 15 countries and 21 organizations have joined REAP.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=124 • www.adaptation-undp.org/sites/default/files/uploaded-images/reap_two-pager_launch.pdf | VI-3 |

| Initiative | Further information | Index |
|--|--|--------------------|
| <p><u>InsuResilience Global Partnership Vision 2025</u></p> <p>The InsuResilience Global Partnership aims to mitigate the impacts of climate-related disasters on poor and vulnerable people by means of pre-agreed financing and risk transfer solutions, enabling them to recover more quickly from disasters. The Partnership's vision is by 2025: To protect 500 million poor and vulnerable people against climate shocks, cover 10 per cent of annual disaster losses through pre-arranged risk financing instruments, support 80 vulnerable countries to have comprehensive disaster risk finance strategies in place, to support 60 vulnerable countries to have new or enhanced (sub-) sovereign pre-arranged risk financing and insurance mechanisms for critical infrastructure and/or rapid funding for disaster response, and to support vulnerable countries in developing property and agricultural microinsurance solutions. The Partnership was established by the Government of Germany together with partners from the G20 and the V20 and brings together 73 members from industrialized and developing countries, civil society, the private sector, development banks and the research community. Germany and the United Kingdom have committed to enhance risk finance and insurance. The private insurance industry has committed \$5 billion of risk capacity.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=126 • www.insuresilience.org | <p>VI-4</p> |
| <p><u>Support for Smallholder Farmers</u></p> <p>The Global Commission on Adaptation seeks to deliver concrete and meaningful action through a set of action tracks that mobilize critical partners. The track on food security and rural livelihoods focuses on building the resilience of 300 million small-scale agricultural producers to climate shocks and stresses that are intensifying. To achieve this goal, the Commission and its partners will increase investment in agricultural research, expand access to crucial farmer advisory services and information, as well as access to improved risk management and financial services that farmers need to adapt to climate change. Support to this initiative comes from the Netherlands, Norway, Sweden, Switzerland and the United Kingdom and from the European Union as well as the World Bank and the Bill and Melinda Gates Foundation, which pledged \$796 million in total. Germany pledged to support 60 million people in rural areas to increase their resilience to the effects of climate change through agroecological approaches.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=125 • https://gca.org/global-commission-on-adaptation/action-tracks/food-security-and-rural-livelihoods | <p>VI-5</p> |

| Initiative | Further information | Index |
|---|---|-------------|
| <p><u>LDC Initiative for Effective Adaptation and Resilience</u></p> <p>The LDC Initiative for Effective Adaptation and Resilience (LIFE-AR) helps the world's poorest countries to adapt to climate change and build a climate-resilient future for their citizens. The initiative: 1) reviews, analyses and deliberates on evidence on long-term adaptation and resilience interventions from around the world; and 2) delivers a long-term vision for adapting towards a climate resilient future by 2050. It aims for all 47 LDCs to deliver climate-resilient development pathways by 2030 and net-zero emissions by 2050, to ensure societies, economies and ecosystems thrive.</p> | <ul style="list-style-type: none"> • https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=127 • www.iied.org/ldc-initiative-for-effective-adaptation-resilience-life-ar | VI-6 |
| <p><u>Regional Road Map for Implementing the 2030 Agenda for Sustainable Development in Asia and the Pacific</u></p> <p>In 2017, ESCAP member States adopted the Regional Road Map for Implementing the 2030 Agenda for Sustainable Development in Asia and the Pacific. Recognizing that there is a scope for strengthened regional cooperation in managing specific hazards, the regional road map embraces disaster risk reduction as one of the priority areas of regional action.</p> | <ul style="list-style-type: none"> • www.unescap.org/sites/default/files/Regional_Road_Map_SDG_in_A-P_Progress_Report_2019.pdf | VI-7 |
| <p><u>The Asia-Pacific Disaster Resilience Network</u></p> <p>The Asia-Pacific Disaster Resilience Network (APDRN), established by ESCAP in 2019 through its Committee on Disaster Risk Reduction, supports integrated multi-hazard early warning systems and closes the gaps in multi-hazard risk assessment and early warning systems (Figure 18). APDRN is a network of networks to mobilize expertise and resources to enhance adaptive and anticipatory capacities of member countries for resilience.</p> | <ul style="list-style-type: none"> • www.unisdr.org/2016/amcdrr/wp-content/uploads/2016/11/FINAL-Asia-Regional-Plan-for-implementation-of-Sendai-Framework-05-November-2016.pdf | VI-8 |
| <p><u>Asia-Pacific Issue-Based Coalition on Building Resilience</u></p> <p>Asia-Pacific Issue-Based Coalition on Building Resilience is put in place to serve as a platform for United Nations agencies to work together to accelerate action on disaster risk reduction, climate change adaptation and resilience in the region. The coalition promotes coordinated support to all member States and the United Nations system at the country level in their implementation of the 2030 Agenda, the Sendai Framework for Disaster Risk Reduction and the Paris Agreement. The United Nations programme of action and the United Nations Resilience Guidance can be leveraged to guide the plans and actions of the IBC.</p> | <ul style="list-style-type: none"> • www.unescap.org/sites/default/files/Agenda%20Item%203b_English.pdf | VI-9 |

| Initiative | Further information | Index |
|--|--|--------------|
| <p><u>Pacific Resilience Partnership</u></p> <p>Pacific Resilience Partnership (PRP) can be capitalized on to support national implementation of the Framework for Resilient Development in the Pacific. The partnership is mandated by the leaders of Pacific countries to support.</p> | <ul style="list-style-type: none"> • www.resilientpacific.org/pacific-resilience-partnership/ | VI-10 |
| <p><u>Asia-Pacific Climate Finance Fund</u></p> <p>The Asia-Pacific Climate Finance Fund is a trust fund under ADB for the development and implementation of financial risk management products that can help unlock capital for climate investments and improve resilience. This allows developing member countries to access financial products that have been available elsewhere.</p> | <ul style="list-style-type: none"> • www.adb.org/what-we-do/funds/asia-pacific-climate-finance-fund | VI-11 |
| <p><u>Article 6 Support Facility</u></p> <p>The Article 6 Support Facility provides technical, capacity-building, and policy development support to developing member countries of ADB to prepare to access new carbon markets envisaged under the framework of Article 6 of the Paris Agreement. The Facility supports developing member countries to identify, develop and pilot mitigation actions for achieving a critical mass of expertise and lessons learned thereby enhancing their ability to contribute to international negotiations and preparedness to operationalize Article 6 of the Paris Agreement.</p> | <ul style="list-style-type: none"> • www.thepmr.org/system/files/documents/ADB%20-%20Article%206%20Support%20Facility.pdf | VI-12 |
| <p><u>Global Resilience Partnership</u></p> <p>Through this inclusive and diverse partnership, organizations have joined forces towards a world where vulnerable people and places are able to thrive in the face of shocks, uncertainty and change. The partnership is guided by the belief that resilience underpins sustainable development in an increasingly unpredictable world.</p> | <ul style="list-style-type: none"> • www.globalresiliencepartnership.org/ | VI-13 |

| Initiative | Further information | Index |
|---|---|---------------------|
| <p><u>Global Commission on Adaptation</u></p> <p>The Global Commission on Adaptation was launched in the Hague on 16 October 2018 to encourage the development of measures to manage the effects of climate change through technology, planning and investment. The group is led by the former United Nations Secretary-General Ban Ki-moon and other high-level officials.</p> <p>The Commission was launched with the support of 17 convening countries, including Canada, China and the United Kingdom and low-lying countries vulnerable to climate change, including Bangladesh and the Marshall Islands. It also included 28 Commissioners representing all sectors of the globe and all sectors of development and industry.</p> <p>The Netherlands initiated the Global Commission on Adaptation to share its knowledge on how it has managed to adopt innovative water management solutions as sea levels rise.</p> | <ul style="list-style-type: none"> • https://gca.org/global-commission-on-adaptation/about-us | <p>VI-14</p> |

Further resources on fostering climate action in cities and for local action

A broad landscape of instruments and information is available to foster resilience and adaptation to climate change in Asia and the Pacific. The following non-exhaustive list of relevant sources is provided to enable the further exploration of opportunities to foster climate resilience in the region.

- Technical guidelines for developing National Adaptation Plans are available at <https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans-naps/guidelines-for-national-adaptation-plans-naps>.
- The GCF Readiness Programme is available at www.greenclimate.fund/readiness.
- The ESCAP briefing note for policymakers, 'Building resilience to disasters in Asia and the Pacific - Resilience in the Global Development Frameworks', includes strategies for building up resilience in Asia and the Pacific as well as indicators for measuring progress of implementation. See www.unescap.org/resources/building-resilience-disasters-asia-and-pacific-resilience-global-development-frameworks.
- The Wayfinder for Resilience is a process guide for resilience assessment, planning and action in social-ecological systems. It represents the frontier in resilience and sustainability science, synthesized into a clear, coherent and hands-on approach. The Wayfinder process consists of five phases, each phase being divided into three modules, and all

modules consist of a set of work cards that describe specific concepts, tasks and activities. See <https://wayfinder.earth>.

- The UNFCCC knowledge-to-action hub for adaptation and resilience aims to assist Parties, and particularly LDCs and SIDS, to improve their understanding and assessment of impacts, vulnerability and adaptation, and make informed decisions on practical adaptation actions and measures in response to climate change on a sound, scientific, technical and socioeconomic basis in consideration of current and future climate change and variability. See <https://www4.unfccc.int/sites/NWPStaging/Pages/NWP-knowledge-resources.aspx>.
- A very comprehensive mapping of global and regional initiatives from funds, networks, alliances, partnerships and organizations to programmes and projects that either have a focus on resilience or cover some aspect of resilience is available from the website of the Global Resilience Partnership. See www.globalresiliencepartnership.org/wp-content/uploads/2018/05/GRP-Resilience-Mapping-6-March-2020.pdf.
- The UNFCCC Climate Action Pathway, Resilience and Adaptation Action Table includes a list of existing global and regional initiatives, networks and platforms, as well as a comprehensive section with selected reading on resilience and adaptation. The Climate Action Pathways outline the longer-term vision for a 1.5°C climate-resilient world and set out actions needed to achieve that future. See https://unfccc.int/sites/default/files/resource/CAP_Resilience_and_Adaptation_AT.pdf.
- Check the NDC Partnership's Climate Finance Explorer for dedicated funds and programmes with adaptation funding, available from: <https://ndcpartnership.org/climate-finance-explorer>.
- The Executive Committee of the Warsaw International Mechanism under the Paris Agreement has established the Fiji clearing house for risk transfer that serves as a repository for information on insurance and risk transfer, in order to facilitate the efforts of Parties to develop and implement comprehensive climate risk management strategies. See <http://unfccc-clearinghouse.org>.
- The ESCAP Building Resilience to Disasters repository offers a broad spectrum of information and resources on enhancing resilience in the

region. See www.unescap.org/our-work/ict-disaster-risk-reduction/building-resilience-disasters.

- The Adaptation Knowledge Portal under the Nairobi Work Programme aims to share good practices and lessons learned by offering an exchange platform to all adaptation practitioners and researchers, including partner organizations of the Nairobi Work Programme. See <https://www4.unfccc.int/sites/nwpstaging/Pages/Home.aspx>.
- PreventionWeb is a collaborative knowledge sharing platform on disaster risk reduction, managed by the United Nations Office for Disaster Risk Reduction. The site offers a range of knowledge products and services to facilitate the work of DRR professionals. See www.preventionweb.net/risk.
- The website of the Asian-Pacific Adaptation Network holds information on designing and implementing climate change adaptation measures, building capacity to access technologies and finance in support of climate change adaptation, and integrating climate change adaptation into policies, strategies and plans (last updated 2019). See www.asiapacificadapt.net.
- The website of the Global Center on Adaptation is available at <https://gca.org/home>.
- The Global Resilience Partnership offers a plethora of useful resources on resilience and adaptation. See www.globalresiliencepartnership.org.
- UNDP Adapting Now for a Resilient Future Portal offers useful information and resources. See www.adaptation-undp.org/adapting-now-resilient-future.

The background image shows a vast landscape of terraced rice fields carved into a hillside. The terraces are filled with green rice plants, and the rows create a rhythmic, wavy pattern across the slope. In the foreground, a person wearing a colorful headscarf and a dark blue shirt is walking through the rice field, carrying a large, round, woven basket on their back. The person is seen from the side, moving away from the viewer. The sky is a pale, hazy blue, and the overall scene is bathed in soft, natural light, suggesting a peaceful rural setting.

Gaps and opportunities analysis checklist

Annex 2

This checklist can be used to identify gaps and opportunities for accelerated climate action in each of the six transformative areas.

| Issue | Notes |
|--|-------|
| Which are further key processes/ measures that foster climate action in this area in your country? | |
| Who are the key stakeholders and institutions involved in processes and measures? | |
| Name specific success factors that have the potential to further accelerate the energy transition in your country. | |
| List specific challenges that slow down the energy transition. | |
| How could these challenges be addressed? | |
| Is any support available to address these challenges? | |
| Which of the initiatives and measures featured in this guidebook could be supportive for your country in this regard? | |
| To Do's | |

