Is 1.5°C within Reach for the Asia-Pacific Region?

Ambition and Potential of NDC Commitments of the Asia-Pacific Countries

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FOREWORD

Ahead of the 26th United Nations Climate Change Conference of the Parties (COP26), United Nations Secretary-General António Guterres has called "for all countries to commit to net-zero emissions by 2050, backed up by concrete long-term strategies, and enhanced Nationally Determined Contributions (NDCs), which collectively cut global emissions by 45 per cent by 2030, compared to 2010 levels".

The Asia-Pacific region will be in the spotlight of COP26 since many of the member States most vulnerable to the impacts of climate change are located here. The seven G20 members from this region are responsible for over half of global GHG emissions, and five of the 10 top countries with the greatest historic responsibility for emissions since the beginning of the twentieth century are from Asia.

This joint assessment report by ESCAP, UN Women, UNEP and the greenwerk shows that while momentum is building in the Asia-Pacific region with over 34 carbon neutrality pledges made and counting, the current NDCs for 2030 will not deliver on those pledges. What is needed is for all Asian and Pacific countries to critically review their NDCs - both the updated and those being updated - and significantly raise ambitions if there is to be any hope of keeping the world temperature increase well below two degrees.

The Asia-Pacific region has great potential to drive the transition of the world towards low-carbon, low emissions development and eventually to carbon neutrality by 2050. Many Asia-Pacific countries have also mainstreamed climate change into their legal frameworks and development plans and established bespoke climate funds. At the same time, pathways towards deep decarbonization are being implemented across different sectors.

While there is an increase in the share of renewable energy in the energy mix, more needs to be done to support those countries that are still planning to rely on coal to meet their future energy needs to transition to cleaner energy sources. Developing long-term low emissions development strategies (LT-LEDS) will support such pathways. Low-carbon and electric vehicle-mobility are emerging, and local governments are making commitments to achieve carbon neutrality by 2050 and support the greening of our cities. Investments in nature-based solutions and empowering women and girls have also emerged as significant factors in ensuring inclusive and effective climate and sustainable development outcomes.

Such ambitious climate action will require a realignment of finance and investment towards green industries and green jobs. Innovative financial instruments and the implementation of debt-for-climate swaps can help to mobilize this additional funding. Putting a price on carbon and applying carbon pricing instruments will create liquidity to drive economic activity up and emissions down. Mandatory climate-related financial disclosure will help investors direct their investments towards climate action solutions that will help manage risks and reap social, economic, and environmental co-benefits.

It is clear from the science and the frequency of disasters in the region that time is not on our side. Without concerted action, carbon neutrality is not within the reach of the Asia-Pacific region by 2050. All stakeholders need to collaborate and build a strong case for decisive climate action. ESCAP, UNEP, and UN Women together with the UN and development partners in the region stand ready to support Asia-Pacific member States and help turn the full power of the region's ingenuity and dynamism into the "net zero" development pathway that our future depends on.

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EXECUTIVE SUMMARY

Current commitments contained in the nationally determined contributions (NDC) of countries in the Asia-Pacific region, and in particular the G20 regional members and the top 10 regional emitters are too low. They need to be significantly enhanced to achieve carbon neutrality in the decade 2050-2060, and to avoid irreversible and devastating outcomes.

This study shows that current unconditional and conditional NDC targets will reduce the Asia-Pacific regional GHG emissions to 29 $GtCO_2e$ by 2030, however this represents an increase of 34 per cent of the emission levels of 2010, and is creating a significant barrier to achieving the aspired regional carbon neutrality by 2050. In addition, it is estimated that under the current climate policy scenario the Asia-Pacific region will reach a total high of 42.7 $GtCO_2e$ GHG emissions by 2030, which is a projected increase of 16 per cent from the record high 2019, and a 96 per cent increase from the GHG emissions levels in 2010.

Even if the Asia-Pacific regional member States adhere to and achieve these NDC targets, their commitments will not deliver on the recommended global reductions of 7 per cent per year for the period 2021-2030, in order to keep the region and the world within the 1.5°C global temperature rise.

Without region-wide carbon neutral pledges, supported by more ambitious NDC targets, carbon neutrality is not within the reach of the Asia-Pacific region by 2050.

Where are the bottlenecks?

The analysis of four enabling factors found that vast the majority of countries in the Asia-Pacific region have worked hard to mainstream climate change in their legal frameworks and development plans, as well as set up bespoke climate funds. Several countries have also demonstrated that a transition to green growth can be in line with the COVID-19 recovery. Indeed, most countries in the region cannot afford to double spend on climate and recovery efforts.

However, while national coordination and transparency in the region is improving, both are further behind than mainstreaming and actions on climate finance. Transparency, in particular, features as the weak spot of NDC implementation, with more than 80 per cent of countries needing to intensify their efforts to establish well-operating monitoring and review systems.

Furthermore, some of the lowest income countries are the most ambitious and are leading the way in terms of ambition and mainstreaming gender in climate policy. In recognising the interlinkages between gender mainstreaming many Asia-Pacific countries included references to the SDG 5 on Gender Equality for meeting climate outcomes in their NDCs, and national climate policies and strategies.

With these findings in mind, it is important for the Asia-Pacific member States to:

- **Firmly commit to implementing even those very cautious GHG emissions' reductions pledges included in the earlier submitted and currently updated NDCs;**
- **Adhere to and follow through with their carbon neutrality pledges;**
- **Put a price on carbon and apply carbon pricing instruments to generate revenues and create the fiscal space that can support a shift towards low-carbon and no-carbon energy sources;**
- **Commit to freezing the expansion of coal-based capacities, and phasing out existing capacities in defined timeframes;**
- **Align COVID-19 recovery with NDC targets and commitments, and with SDG implementation and Long-Term Low Emission Development (LT-LED) strategies;**
- **Strengthen gender mainstreaming to ensure more inclusive and impactful climate outcomes;**
- **Increase efforts under all four enabling factors, and especially coordination and transparency (Measurement Reporting and Verification), to support higher ambition;**
- **Further assess any measures taken to address the impacts and threats of the COVID-19 pandemic for their climate compatibility;**
- **Share best practices and lessons learned, including for investments in nature-based climate solutions with all stakeholders at the local, national, and regional levels to build a stronger case for decisive climate action and policy measures from the whole society.**

ACKNOWLEDGEMENTS

This joint ESCAP, UN Women, UNEP and the greenwerk assessment report, *Is 1.5°C within Reach for the Asia-Pacific Region? Ambition and Potential of NDC Commitments of the Asia-Pacific Countries*, provides a critical review of the current NDC commitments of the regional member States and how these contribute to keeping global temperatures way below 2°C as per the Paris Agreement. The Report includes an elaborated assessment framework of climate ambition and enabling factors, assessment of gender mainstreaming for improving readiness of countries to accelerate implementation and develop ambitious NDC reviews. This comprehensive assessment represents a first baseline of ambition and enabling factors in 2021, and the NDCs that were analysed were the ones submitted up to the end of August 2021.

The report has been developed by a joint team led by Aneta Nikolova, including Hannah Ryder, Lubomir Kalniev (ESCAP), Amy Reggers, Inkar Kadyrzhanova, Riina Haavisto, Samira Yasmin (United Nations Entity for Gender Equality and the Empowerment of Women-UN Women), Mozaharul Alam, Sudhir Sharma (UNEP), Björn Dransfeld and Christine Nettersheim (the greenwerk, Germany) that was guided with substantive inputs from Katinka Weinberger, Chief, Environment and Development Policy Section, Environment and Development Division, ESCAP. The report was peer reviewed by Jens Radschinski and Björn Fonden (UNFCCC/RCC for Asia-Pacific).

The report was prepared under the overall direction of Kaveh Zahedi, Deputy Executive Secretary and O-I-C of the Environment and Development Division of ESCAP, Dechen Tsering, Regional Director, UN Environment Programme, Asia and the Pacific and Mohammad Naciri, Regional Director, UN Women in Asia and the Pacific.

Data and graphs were provided by Vorada Amphan, Research Assistant, Lubomir Kalniev, Consultant and Hannah Ryder, Regional Climate Consultant, Environment and Development Division. Anoushka Ali edited, proofread and finalized the publication and final design, layout, art work and refined graphs were done by Jeff Williams. Siriwat Theerawong, Environment and Development Division arranged for the timely online publication and ensured that the report is accessible by readers worldwide.

The Strategic Communications and Advocacy Section of ESCAP collaborated in disseminating and communicating the findings of the report through media outlets.

Support for the research was provided through the ESCAP regional project on region Supporting Countries in the Asia-Pacific region to meet to meet commitments to the Paris Agreement funded by the Russian Federation.

EXPLANATORY NOTES

This report is studying 49 of the ESCAP member States, which are listed in groupings of countries and territories/areas listed alphabetically as follows:

49 ESCAP member States: Afghanistan; Armenia; Australia; Azerbaijan; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; China; Democratic People's Republic of Korea; Fiji; French Polynesia; Georgia; Guam; Hong Kong, China; India; Indonesia; Iran (Islamic Republic of); Japan; Kazakhstan; Kiribati; Kyrgyzstan; Lao People's Democratic Republic; Macao, China; Malaysia; Maldives; Marshall Islands; Micronesia (Federated States of); Mongolia; Myanmar; Nauru; Nepal; New Zealand; Pakistan; Palau; Papua New Guinea; the Philippines; the Republic of Korea; the Russian Federation; Samoa; Singapore; Solomon Islands; Sri Lanka; Tajikistan; Thailand; Timor-Leste; Tonga; Turkey; Turkmenistan; Tuvalu; Uzbekistan; Vanuatu; and Viet Nam.

Least developed countries: Afghanistan, Bangladesh, Bhutan, Cambodia, Kiribati, Lao People's Democratic Republic, Myanmar, Nepal, Solomon Islands, Timor-Leste, Tuvalu, and Vanuatu. Samoa was part of the least developed countries prior to its graduation in 2014.

Landlocked developing countries: Afghanistan, Armenia, Azerbaijan, Bhutan, Kazakhstan, Kyrgyzstan, Lao People's Democratic Republic, Mongolia, Nepal, Tajikistan, Turkmenistan, and Uzbekistan.

Small island developing States: Cook Islands, Fiji, Kiribati, Maldives, Marshall Islands, Micronesia (Federated States of), Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor Leste, Tonga, Tuvalu, and Vanuatu.

East and North-East Asia: China; Democratic People's Republic of Korea; Hong Kong, China; Japan; Macao, China; Mongolia; and the Republic of Korea.

North and Central Asia: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikistan, Turkmenistan, and Uzbekistan.

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

South and South-West Asia: Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan, Sri Lanka, and Turkey.

South-East Asia: Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste, and Viet Nam.

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References to dollars ($) are to United States dollars, unless otherwise stated. The term "billion" signifies a thousand million. The term "trillion" signifies a million million.

ABBREVIATIONS

ADB	Asian Development Bank
AFOLU	Agriculture, Forestry and Other Land Use
APDRN	Asia-Pacific Disaster Resilience Network
BAU	Business as Usual
BTRs	Biennial Technical Reports
BURs	Biennial Update Reports
CIF	Climate Investment Funds
COP	Conference of the Parties
CPEIR	Climate Public Expenditures and Institutional Review
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
ETF	Enhanced Transparency Framework
ETS	Emissions Trading System
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse gas
GNI	Gross National Income
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency
IUCN	International Union for Conservation of Nature
LDCs	Least Developed Countries
LT-LEDS	Long-Term Low Emissions Development Strategies
LULUCF	Land Use, Land-Use Change and Forestry
MDBs	Multilateral Development Banks
NAPs	National Adaptation Plans
NDCs	Nationally Determined Contributions
NGO	Non-governmental organization
REDD+	Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
REEEP	Renewable Energy and Energy Efficiency Partnership
SADDD	Sex, Age and Disability Disaggregated Data
SDG	Sustainable Development Goals
SIDS	Small Island Developing States
SMEs	Small and medium-sized enterprises
V-ETS	Voluntary Emissions Trading System
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
UN Women	The United Nations Entity for Gender Equality and the Empowerment of Women

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CHAPTER 1

BACKGROUND

1. BACKGROUND

Objective of this Report

The Asia-Pacific region is in a critical stage of its socioeconomic development. Economic growth, prior to the COVID-19 pandemic brought significant welfare improvements and poverty reduction, however, has also created significant environmental and climate-related challenges for the region.

These challenges include increased variability of weather, more frequent and intense hydrometeorological disasters, such as floods and droughts, causing the displacement of people, the loss of human lives, and severe impacts on agricultural production, degradation of marine and terrestrial ecosystems and considerable economic damages.

While the vulnerabilities to climate induced risk in the countries in the Asia-Pacific region are increasing they have a unique opportunity to:

- **Take stock of their current and planned greenhouse gas (GHG) emissions from 2021-2030 and design low emissions development strategies that will support more ambitious nationally determined contributions (NDC) commitments to Paris Agreement.**
- **Develop viable financial plans to attract investments to support implementation of GHG emissions reduction actions and meet these commitments.**
- **Develop green post-COVID-19 recovery aligned with these commitments to create the fiscal space to phase out fossil fuels and stimulate renewable energy innovation.**

Such pathways are also aligned with the calls from the United Nations Secretary-General, António Guterres, ahead of the 26th United Nations Climate Change Conference of the Parties (Glasgow COP26), "for all countries to commit to net-zero emissions by 2050, backed up by concrete long-term GHG reduction strategies, and enhanced Nationally Determined Contributions (NDCs) which collectively cut global emissions by 45 per cent by 2030, compared to 2010 levels" (WMO, 2021).

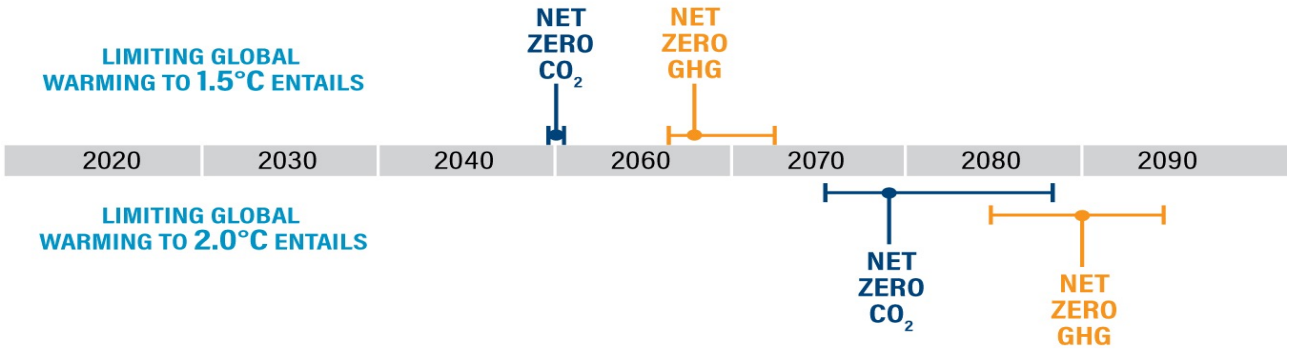
The United Kingdom Presidency of the 26th United Nations Climate Change Conference of the Parties (Glasgow COP26) supports these calls for more ambitious commitments through:

- **Securing global net-zero by mid-century, and keep 1.5°C within reach;**
- **Adapting to protect communities and natural habitats;**
- **Mobilizing finance to fulfil US$ 100 billion per year commitment;**
- **Working together to deliver on the net-zero commitments in the decade to come.**

Figure 1 illustrates what such net-zero commitments will require.

1. Those tools and mechanisms often include decarbonisation targets, carbon taxes, and emissions trading.

Figure 1: Global timeline to reach net-zero emissions



Source: IPCC Special Report on Global Warming of 1.5ºC/WRI (IPCC, 2021).

This report provides an assessment of which countries in the Asia-Pacific region are moving forward with considerable GHG emissions reductions and towards carbon neutrality. It discusses whether their actions are sufficient to avoid further dramatic changes, what enabling factors countries have been put in place, and what more can be done, especially considering the ongoing COVID-19 pandemic and its implications on fiscal space.

More specifically, this report aims to provide insight and guidance on the needs and practicalities of raising ambition for climate action, and towards carbon neutrality in the Asia Pacific region. As such, its objectives are four-fold:

i. To analyse if 1.5°C is within reach in the Asia-Pacific region based on the commitments in the nationally determined contributions, as well as the current carbon neutrality pledges;

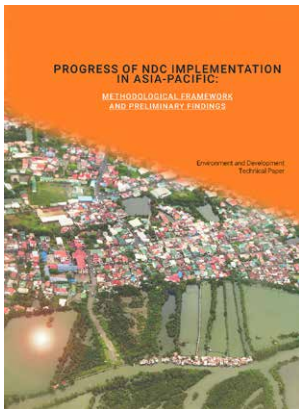
ii. To review the specific targets and tools that countries in the region, as a whole and in various subregions, are using to clarify and cement their ambitions;[1]

iii. To assess the enabling mechanisms, including gender mainstreaming, that countries in the region are putting in place in order to incentivise and manage the pathway to high ambition, and explore whether and how these mechanisms are really making a difference to raising ambition;

iv. To draw out guidance and opportunities for countries in the region to share lessons learned and support each other as they seek low carbon and green growth opportunities that will benefit their citizens equally, including as part of a greener post-COVID-19 recovery to build forward better.

v. This report provides a ground-breaking overview of climate ambition and enablers for the Asia-Pacific region, including the role of gender mainstreaming in NDCs and climate action commitments. It builds upon the findings and recommendations of the global Emissions Gap Report 2020 (UNEP, 2020), and the recently released synthesis report of the NDCs under the Paris Agreement (UNFCCC, 2021).

The findings of this assessment can be used to support discussions of regional GHG emissions scenarios and opportunities for increasing regional carbon neutrality pledges ahead, during and after the COP26. The analytical framework provides a baseline for future regional assessments of the GHG emissions and opportunities for raising ambition to keep the global temperature increase within 1.5°C.



The report also builds on previous research providing an overview of the methodological framework and preliminary findings of the assessment of the readiness for implementation of the NDCs in Asia and the Pacific Region.

- The assessment contains five innovations and improvements:
- It analyses the level of ambition of countries in relation to various comparable metrics, including and beyond the ndc targets commitments.
- It takes a deep dive into the analysis of countries' ambition and enabling factors.
- It explores the impact of mainstreaming gender as one of the key means to enabling higher climate ambition and harnessing co-benefits related to SDGs, and reviews best practice and lessons learned on this across the region.
- It updates the 2020 case studies and adds on additional information on country analysis.
- It builds on expanded data collection, and ambition and enabling factors analysis to all Asia-Pacific member States, including Annex I Parties to the UNFCCC.

Climate change is a shared responsibility where everyone matters, but its impacts are not distributed equally. Those who are most impacted by this global phenomenon are often the ones who already experience many forms of socioeconomic discrimination. The integration of gender equality and human rights-based approaches in climate action has the potential to deliver on social, economic and environmental outcomes, enhancing adaptive capacities and fulfilling rights while safeguarding the needs of the most vulnerable.

As noted in the NDC Synthesis Report, Parties increasingly recognise the integration of gender as a means to enhance ambition and effectiveness of climate action (UNFCCC, 2021). As part of this assessment report, the integration of gender mainstreaming has been analysed in many INDCs and updated NDCs of 49 Asia-Pacific member States that were studied in this report. This assessment report provides an innovative review of gender mainstreaming as a contributor to the four enabling factors for climate action and suggests that steps for enhancing gender mainstreaming can result in increased climate outcomes.

Finally, it should be noted that while this report has been as comprehensive as possible, there have been limitations in data availability. In this regard, as countries move toward COP26, continue to align their COVID-19 responses with climate action, and learn from each other, more information on the state of NDC implementation will continuously become available. Thus, this comprehensive assessment represents a first baseline of ambition and enabling factors in 2021, and the NDCs that were analysed were the ones submitted up to the end of August 2021. ESCAP, UN Women and UNEP will continue to partner with countries in the region and other agencies to support strengthened action and will publish a further update in 2022. For that update, other analyses may be included, such as reviewing whether and how attitudes to human rights can affect climate ambition.

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CHAPTER 2

IS 1.5°C WITHIN REACH FOR THE ASIA-PACIFIC REGION?

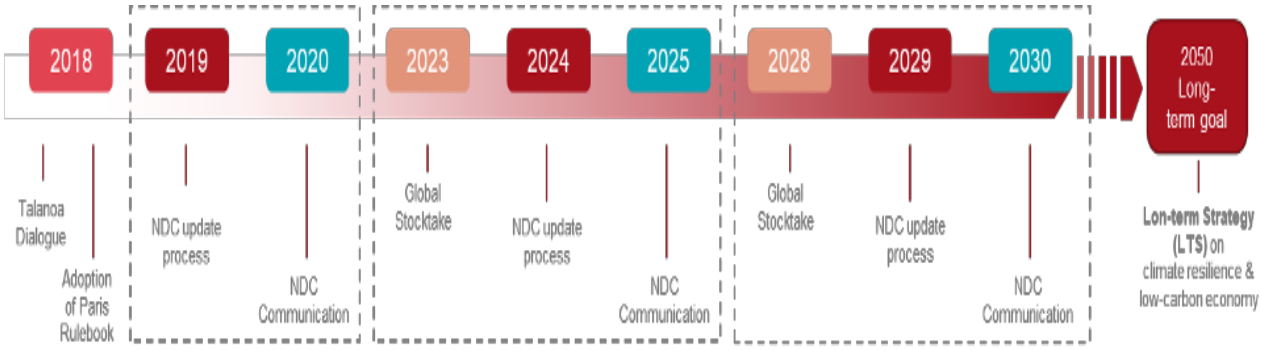
2. IS 1.5°C WITHIN REACH FOR THE ASIA-PACIFIC REGION?

The 2015 Paris Agreement marked the most important milestone of multilateral climate policy since the ratification of the Kyoto Protocol, and is at the core of driving international climate action ambition for the decade ahead. The Paris Agreement recognises the importance of national circumstances, responsibilities and capabilities, gives a high degree of flexibility to countries with different development pathways and it requires Parties to "prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve". It further stipulates that "successive nationally determined contribution will represent a progression beyond the Party's then current nationally determined contribution and reflect its highest possible ambition", and those need to be communicated both internationally and domestically. The NDCs cover the areas of mitigation (for example, energy efficiency improvements in industry and buildings, increasing the share of renewable energies in the local energy mix or commitments to phase out coal, electrification of transport, waste-related emissions, etc.), adaptation and means of implementation accompanied with information on enabling measures being taken on (a) technologies, b) finance and climate-responsive budgeting, and c) capacity building, and climate-responsive budgeting, mainstreaming or coordination processes), as well as information on how countries will enforce and monitor the impact of these actions.

Importantly, there has been a recent push to articulate the inextricable links between gender equality issues and climate change. This is evident in the NDCs (the NDC Synthesis report provides a detailed update of progress on gender integration) at the UNFCCC level (with the adoption of the Enhanced Lima Work Programme on Gender and the updated Gender Action Plan), as well as across international frameworks on gender equality and women's rights, such as the Convention on the Elimination of all forms of Discrimination against Women (CEDAW) (specifically General Recommendation 37 on the gender-related dimensions of disasters and climate change), and the Beijing Platform for Action. This has resulted in increased integration and action to address issues on gender inequality during planning, goals development and implementation of NDCs.

The ambition-raising approach, which is expected to be agreed upon during COP26 foresees that countries should communicate their updated NDCs every five years, with each updated NDC aiming to be more ambitious (Figure 2).

Figure 2: Ambition-raising process through regular NDC updates under the Paris Agreement



Source: the greenwerk. Available at https://www.thegreenwerk.net/index.php

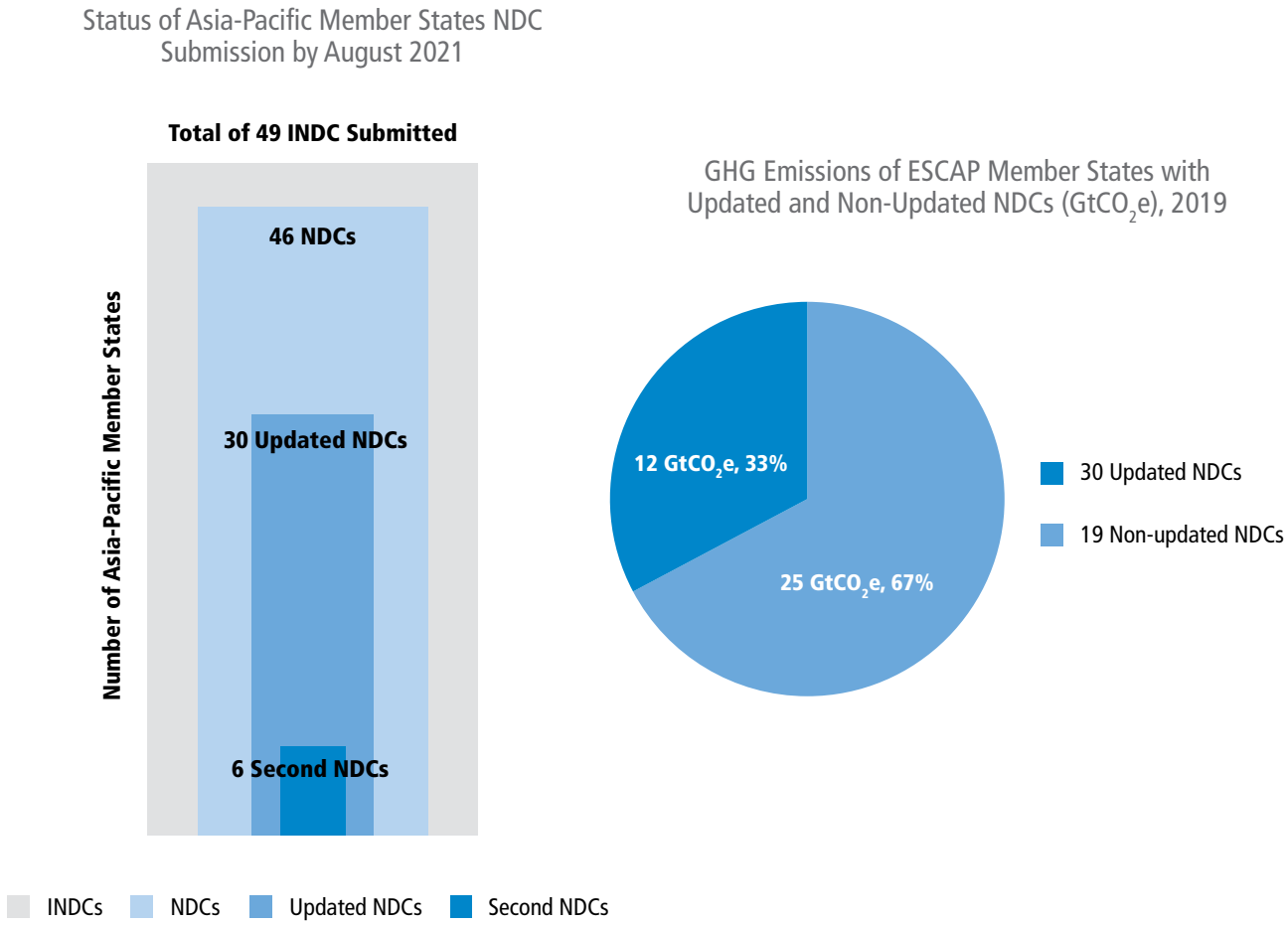
The first round of intended NDCs were submitted over the course of 2016, while the first updates of the NDCs were due to be communicated by the end of 2020, and due to the COVID-19 pandemic the deadline was extended to the first quarter of 2021. However, there are still some outstanding NDC updates including from the Asia-Pacific region ahead of COP26.

These NDCs form the main basis of the analysis in this assessment report. Other sources, such as national communications and biennial reporting to the UNFCCC, climate change, as well as gender equality laws and policies, and frameworks (including laws, policies and international periodic reporting on gender equality), were also thoroughly reviewed, and relevant carbon neutral pledges from policy statements and government communications from the Asia-Pacific member States were also taken into consideration.

More Updated NDCs, though with Low Ambition

As seen in Figure 3, all 49 Asia-Pacific member States have submitted their Intended Nationally Determined Contributions (INDCs), 46 of which evolved into Nationally Determined Contributions (NDCs). By August 2021, 30 countries submitted updated/revised NDCs, of which 6 were a second NDC submission.[1] That is a noteworthy effort of the Asia-Pacific member States considering that many updated NDCs were developed in the difficult times of the COVID-19 pandemic.

Figure 3: Status of ESCAP member States with NDC submissions and their GHG emissions share ($GtCO_2e$), August 2021



Source: ESCAP.

1. The 6 countries that submitted a second NDC are: Bhutan, Marshal Islands, Nepal, PNG, Samoa, and Tonga.

In total, these 49 countries, collectively emitted over 36.7 $GtCO_2e$ in 2019. Figure 3 shows that the 30 countries[2] that updated their NDCs accounted for 33 per cent of the regional GHG emissions in 2019, while the countries that are yet to submit their updated NDCs accounted for the remaining 67 per cent of the regional GHG emissions. Among those 19 countries are China and India, whose NDC commitments are highly anticipated and are expected to positively tip the balance of the Asia-Pacific regional GHG emissions reductions.

Why Does Enhanced Climate Action in the Asia-Pacific Region Matter?

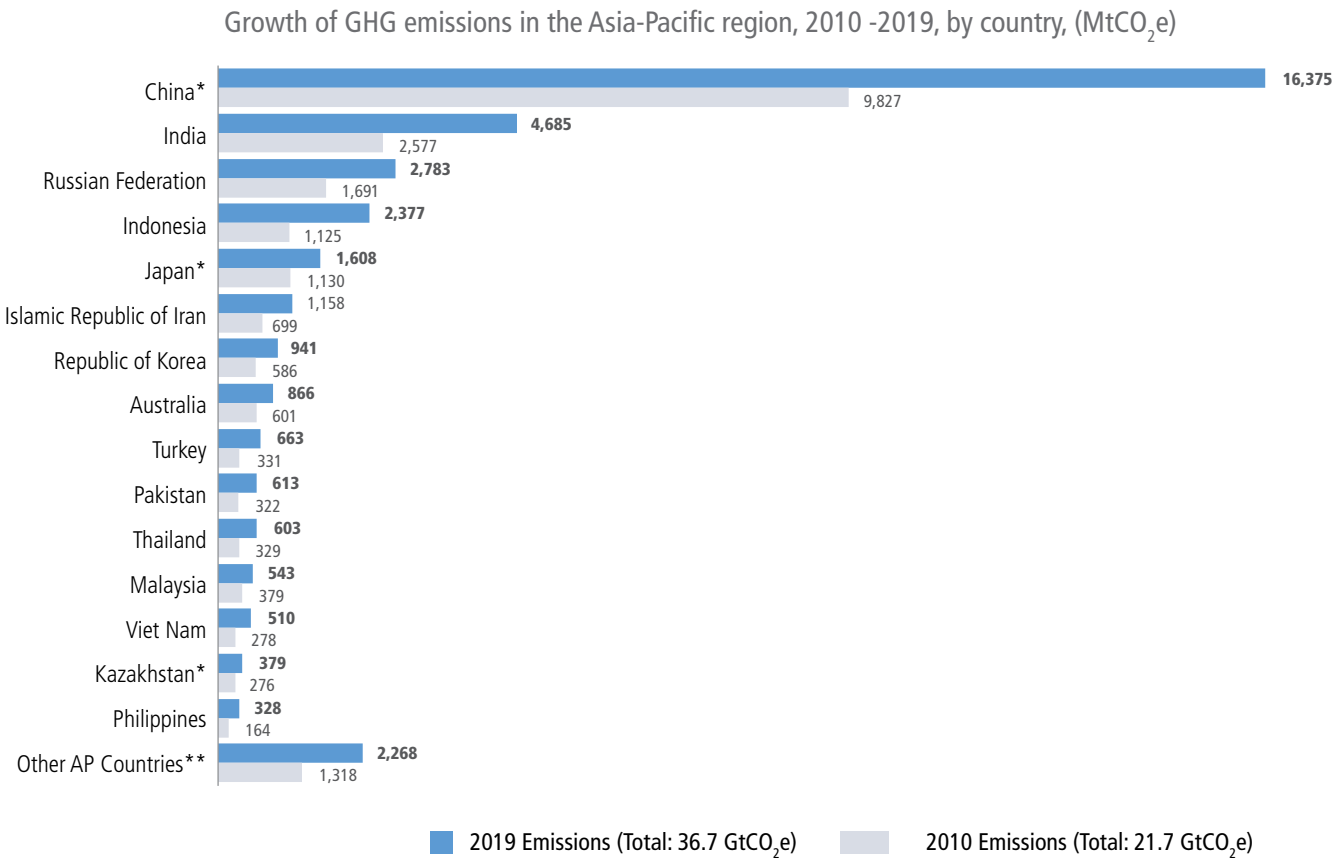
While the Asia-Pacific region cannot act alone on climate change, there is no doubt that the climate actions in this region can have a huge positive impact on the rest of the world if decisive action to curb GHG emissions are taken. For instance, by 2019, the seven countries in the region that are members of the G20; Australia, China, India, Indonesia, Japan, the Russian Federation and Turkey, were responsible for about 30 $GtCO_2e$ GHG emissions, and over 50 per cent of global GHG emissions.

The synthesis report, by the UNFCCC secretariat (UNFCCC, 2021), states that despite existing NDC commitments, the total global GHG emission levels, in 2030, are estimated to reach 55.1 $GtCO_2e$, which is an increase of 16.3 per cent from the global 2010 levels.[3] To achieve the 1.5°C degree temperature goal of the Paris Agreement, the IPCC recommends that global GHG emissions are required to decline by about 45 per cent by 2030, from the 2010, level to reach net- zero CO_2 around 2050.

By 2019, the GHG emissions from the Asia-Pacific region had seen a steep increase of over 60 per cent above 2010 levels (from 21.7 $GtCO_2e$ in 2010 to 36.7 $GtCO_2e$ in 2019), as shown in Figure 4. The region also emitted over 60 per cent of total global GHG emissions for that year.[4] Despite the considerable dip of 7 per cent of the regional GHG emissions seen at the beginning of the year, due to the impact of the COVID-19 pandemic, the Asia-Pacific regional GHG emissions reached the level of 35.0 $GtCO_2e$, by mid-2020.

2. Armenia, Australia, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, Fiji, Georgia, Indonesia, Japan, the Lao People's Democratic Republic, Malaysia, Maldives, Marshal Islands, Mongolia, Myanmar, Nepal, New Zealand, Papua New Guinea, Philippines, Republic of Korea, the Russian Federation, Samoa, Singapore, Solomon Islands, Sri Lanka, Thailand, Tonga, Vanuatu and Viet Nam.
3. Estimated global GHG emissions in 2010 reached 47.3 Gt CO_2 e. Data is available at https://www.climatewatchdata.org/ghg-emissions
4. Estimated global GHG emissions in 2019 reached 52.4 Gt CO_2e, while the Asia-Pacific region reached a high of 36.7 Gt Co_2e. Data is available at https://www.climatewatchdata.org/ghg-emissions.

Figure 4: Growth of GHG emissions in the Asia-Pacific region, 2010 -2019, by country, ($MtCO_2e$)



* Pledged net-zero CO_2 by 2050-2060

** Includes other countries with net-zero CO_2 pledges

Insufficient Levels of Commitment in the Updated NDCs

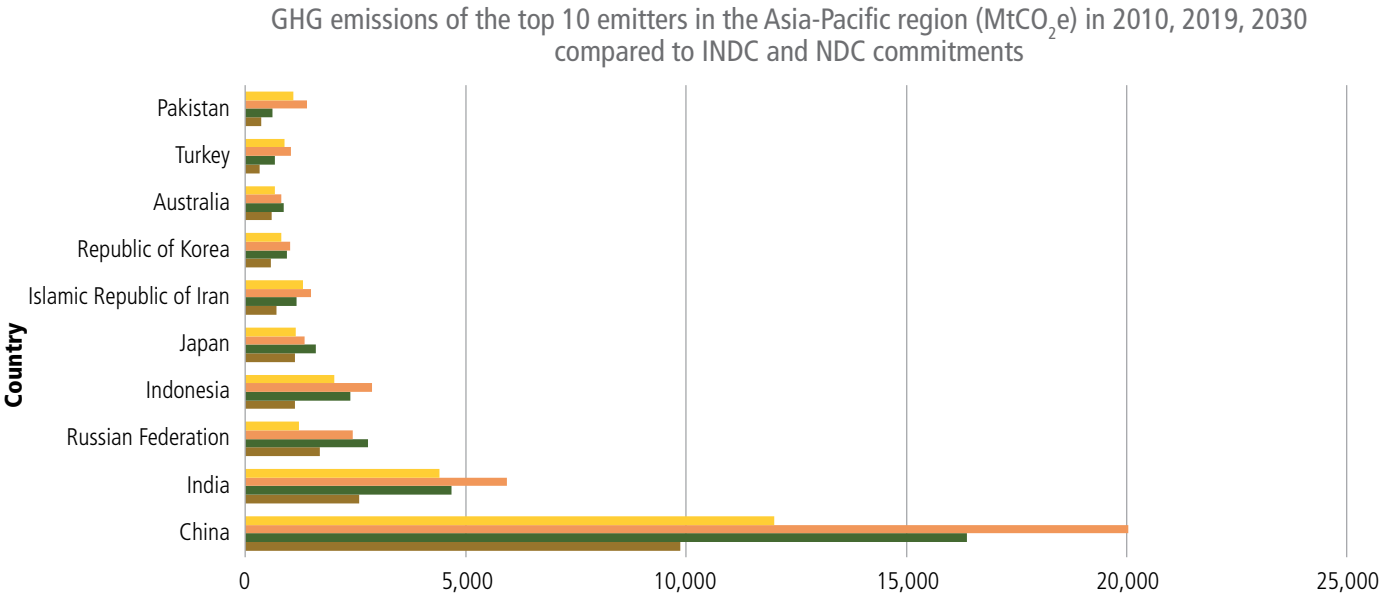
The 30 member States of the Asia-Pacific region that submitted their updated NDC commitments by August 2021 were responsible for only 33 per cent of the regional GHG emissions in 2019, and their commitments were too low to support net-zero CO_2 emissions by 2050, as shown in Figure 3.

If all the unconditional and conditional commitments of the 30 updated NDCs are implemented, these will reduce 3.6 $GtCO_2e$ from GHG emissions of 42.7 $GtCO_2e$ by 2030, or the equivalent of only 8 per cent of the estimated regional climate policy scenario. So, for the Asia-Pacific region to make significant progress towards achieving net-zero CO_2 targets by 2050, these 30 updated NDC commitments need to be further enhanced for higher GHG emissions, reductions and be combined with higher-ambition updates from the other 19 member States.

Updating NDC Commitments of Higher Emitters is Critical

The updated NDCs commitments of Asia-Pacific member States, such as China, India, the Islamic Republic of Iran, Kazakhstan, Pakistan, and Turkey, who are among the key top 10 emitters in the region, have the potential to tip the balance of the regional and global GHG emissions reductions, as shown in Figure 5. The GHG emission shares of the top 10 emitters equals 87 per cent and 89 per cent of the regional GHG emissions in 2019 and 2030, respectively.

Figure 5: GHG emissions of the top 10 emitters in the Asia-Pacific region ($MtCO_2e$) in 2010, 2019, 2030 compared to INDC and NDC commitments

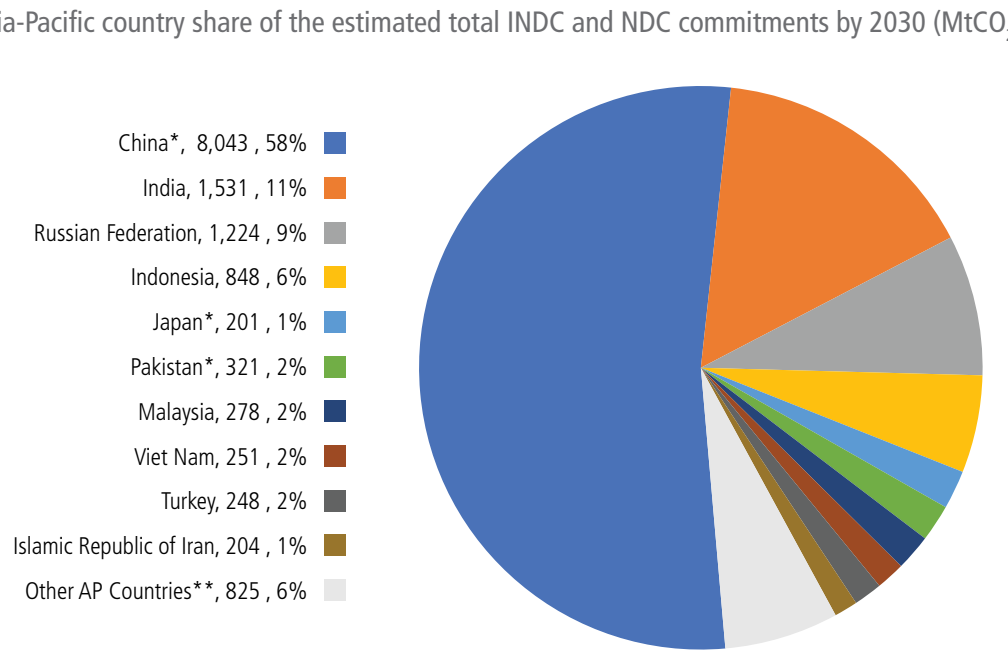


	China	India	Russian Federation	Indonesia	Japan	Islamic Republic of Iran	Republic of Korea	Australia	Turkey	Pakistan
After NDC Commitments	12,000	4,398	1,220	2,022	1,149	1,313	818	676	884	1,084
2030 Current Policies	20,043	5,929	2,443	2,870	1,352	1,490	1,016	821	1,034	1,405
2019	16,375	4,685	2,783	2,377	1,608	1,158	941	866	663	613
2010	9,872	2,577	1,691	1,125	1,130	699	586	601	331	357

GHG emissions ($MtCO_2e$)

Figure 6 shows the relative share of the estimated INDC and updated NDC commitments for GHG emissions reductions of the top 15 emitters in the Asia-Pacific region. The total INDC and NDC commitments for GHG emissions reductions of only China, India, the Russian Federation and Indonesia equals to 12.5 $GtCO_2e$, or about 80 per cent of the total Asia-Pacific commitments, demonstrating the impact that these member States have on enhancing their ambition on regional climate action.

Figure 6: Asia-Pacific country share of the estimated total INDC and NDC commitments by 2030 ($MtCO_2e$)



* Pledged net-zero CO_2 by 2050-2060

** Includes other countries with net-zero CO_2 pledges

Asia-Pacific Regional GHG Emissions Scenarios

Projections developed for this assessment report show that the expected GHG emissions in the Asia-Pacific region will continue to be too high to achieve the required 45 per cent reductions, from the 2010 GHG emissions levels, to achieve the 1.5°C goal.

As shown in Figure 7, based on unconditional and conditional, as well as the INDC commitments from the Asia-Pacific member States, there is a collective commitment[5] to reduce an estimated 13.5 $GtCO_2e$ GHG emissions or 32 per cent of the total estimated 42.7 $GtCO_2e$ regional GHG emissions by 2030,[6] as per current climate policies. The graph in Figure 8 also shows the projected growth to 50 $GtCO_2e$ based on the ESCAP economic development scenarios by 2060.[7]

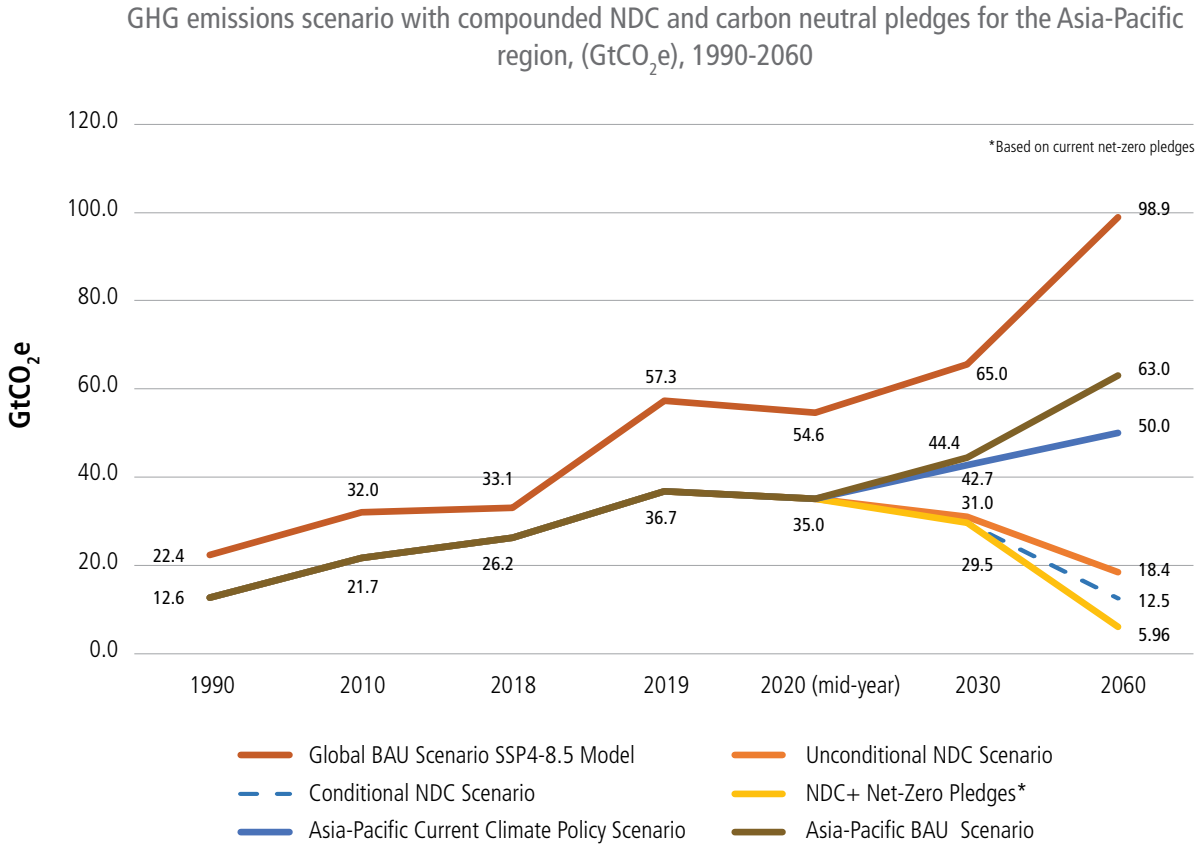
However, even if the Asia-Pacific regional member States achieve their NDC targets, the commitments will still not deliver on the recommended reductions of 7 per cent per year for the period 2021-2030 (UNEP, 2020). Based on the IPCC recommendation for 45 per cent emission reductions from the 2010 levels, to keep the world within the 1.5C temperature rise, the recommended GHG emissions levels by 2030 for the Asia-Pacific region are estimated to be around 9.8 $GtCO_2e$ (IPCC, 2021).

However, as shown in figure 7, this benchmark is currently out of reach for the Asia-Pacific region, because of the very low ambition of the current regional INDC and NDC commitments. These commitments are projected to result in an estimated 29.5 $GtCO_2e$ GHG emissions in 2030, which is a threefold increase from the recommended threshold for that year and represent a 34 per cent growth from the 2010 levels.

5. These include recent policy declarations from the Governments of those countries that have not yet submitted updated NDCs.
6. It is to be noted that these estimates are based on targets derived from the INDC, NDC and updated NDC of the Asia-Pacific member States, which differ methodologically for each document and required specific modifications to be made comparable and uniform.
7. Based on the scenarios developed by Lu, West and Schandl, 2020.

Figure 7 shows the eminent impact of a business-as-usual (BAU) scenario for the Asia-Pacific region with GHG emissions rising to 63 $GtCO_2e$, when regional countries fail to follow on their NDC commitments and only some limited climate action is taken.

Figure 7: GHG emissions scenario with compounded NDC and carbon neutral pledges for the Asia-Pacific region, ($GtCO_2e$), 1990-2060



Source: ESCAP.

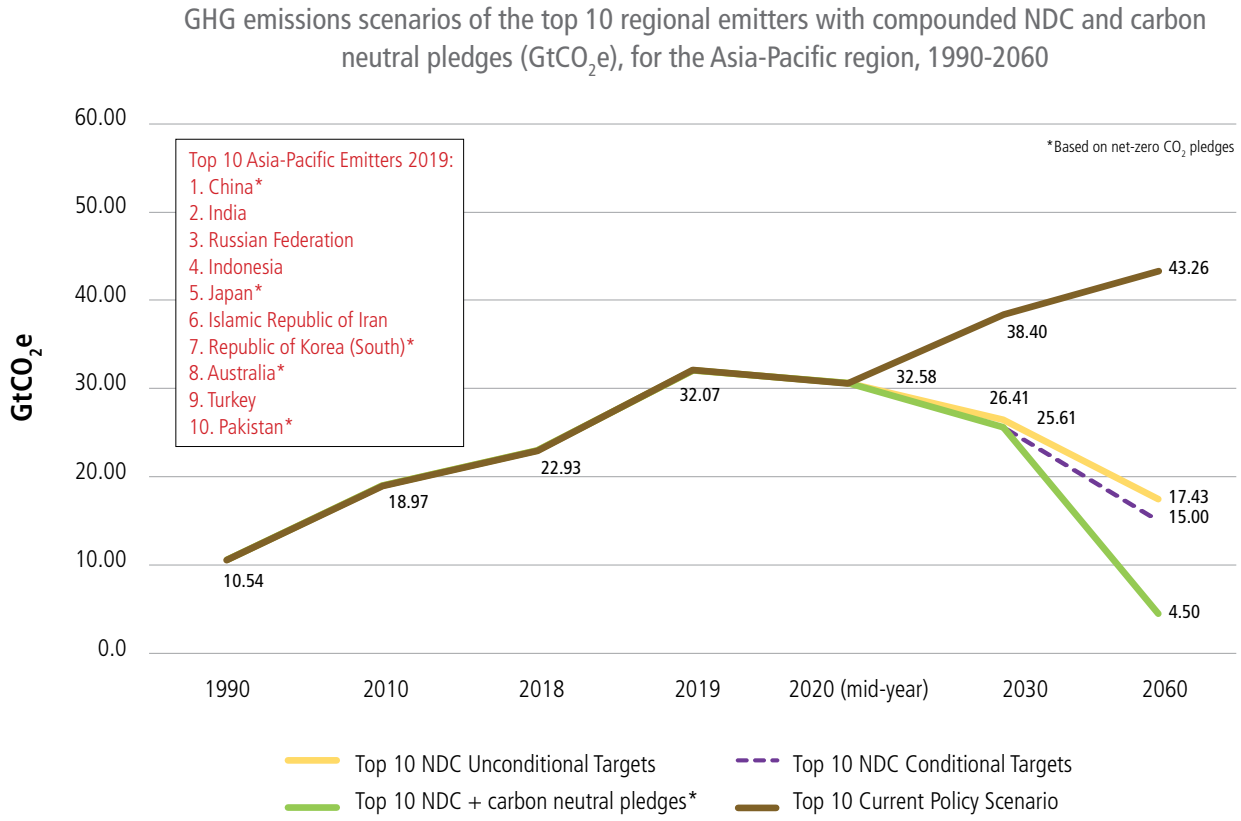
Other assessments of climate ambition of NDCs globally, and in the Asia-Pacific region, concur with this analysis. The 2016, 2020 and 2021 reports by the UNFCCC secretariat find that aggregate emission reductions communicated in the initial round, and in the recently submitted updated NDCs, do not fall within the range of least-cost 2°C scenarios defined by the Intergovernmental Panel on Climate Change (IPCC) (IPCC, 2018, UNFCCC, 2021, and WHO, 2021).[8]

An analysis of unconditional and conditional commitments in the updated NDCs and the INDCs of the 10 highest emitters,[9] shows that some countries will have much higher GHG emissions in 2030 compared to 2019, which will set a record for regional GHG emissions, while other countries have estimated very low GHG emission reduction scenarios. However, the share of their GHG emissions reductions commitments is quite considerable; close to 90 per cent of the total regional commitments. Furthermore, if the 10 highest emitters decide to, at least, triple their current NDC commitments, and even commit to carbon neutrality by 2050/2060, as shown in Figure 9, only then will the Asia-Pacific region be able to achieve progress on the net-zero CO_2 race. However, this analysis also shows

8. The report by the UNFCCC secretariat (IPCC, 2018), 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 Asia-Pacific countries with the highest GHG emissions in 2019 are China, India, the Russian Federation, Indonesia, Islamic Republic of Iran, Japan, Republic of Korea, Australia, Turkey and Pakistan.

that many countries in the region have not reached their potential in their commitments for GHG emissions reductions, and that the next NDC review and stocktake, in 2025, will provide an ample opportunity to significantly increase their mitigation ambition.

Figure 8: GHG emissions scenarios of the top 10 regional emitters with compounded NDC and carbon neutral pledges ($GtCO_2e$), for the Asia-Pacific region, 1990-2060



Source: ESCAP.

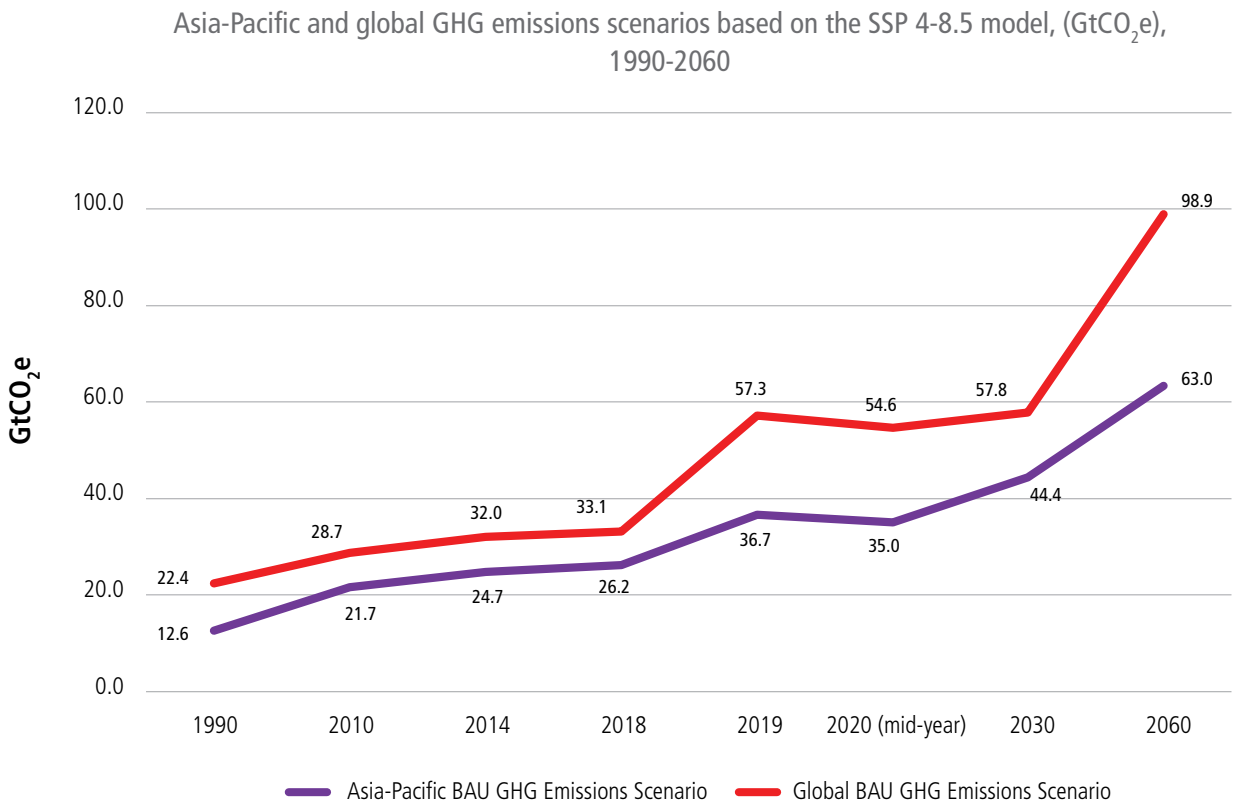
Clearly, the current INDC and updated NDC commitments demonstrate a very low ambition, are extremely fragile and dependent on how the global, regional, and national climate commitments will evolve. To be able to illustrate the consequences from a potential fallout of climate action commitments, two worse and worst 'dooms-day' scenarios have been developed. These scenarios of possible Asia-Pacific regional GHG emissions growth projections combine forecasts of the International Monetary Fund for Gross Domestic Product growth with assumptions of development trajectories, without any considerations of climate action policies, and with a regional extrapolation of the global 'Shared Socioeconomic Pathways' Models (SSP4-8.5), and the 'Representative Concentration Pathways' Model (RCP8.5), respectively. These scenarios demonstrate what could happen when extreme business-as-usual (BAU) scenarios play out and will challenge any opportunities to reach carbon neutrality by 2050, and GHG emissions neutrality between 2060-2070.

The SSP4-8.5 model provides five pathways that the world could undertake presenting a broader view of a "business as usual" world without future climate policy, with global warming in 2100 ranging from a low of 3.1ºC to a high of 5.1ºC above pre-industrial levels (Hausfather, 2018).

The RCP8.5 model provides the highest possible emissions global warming scenario based on 'a business-as-usual' and in world situation where no climate change regulatory policy is functioning resulting in devastatingly high global temperatures (Riahi and others, 2011).

Figure 9 presents a possible BAU scenario for the Asia-Pacific region with GHG emissions rising to 63 $GtCO_2e$, when regional countries fail to follow on their NDC commitments and only some limited climate action is taken. This is almost twice the current 2020 regional GHG emissions. Though this is the best of the dooms-day scenarios, it still holds dire consequences for the region and the rest of the world.

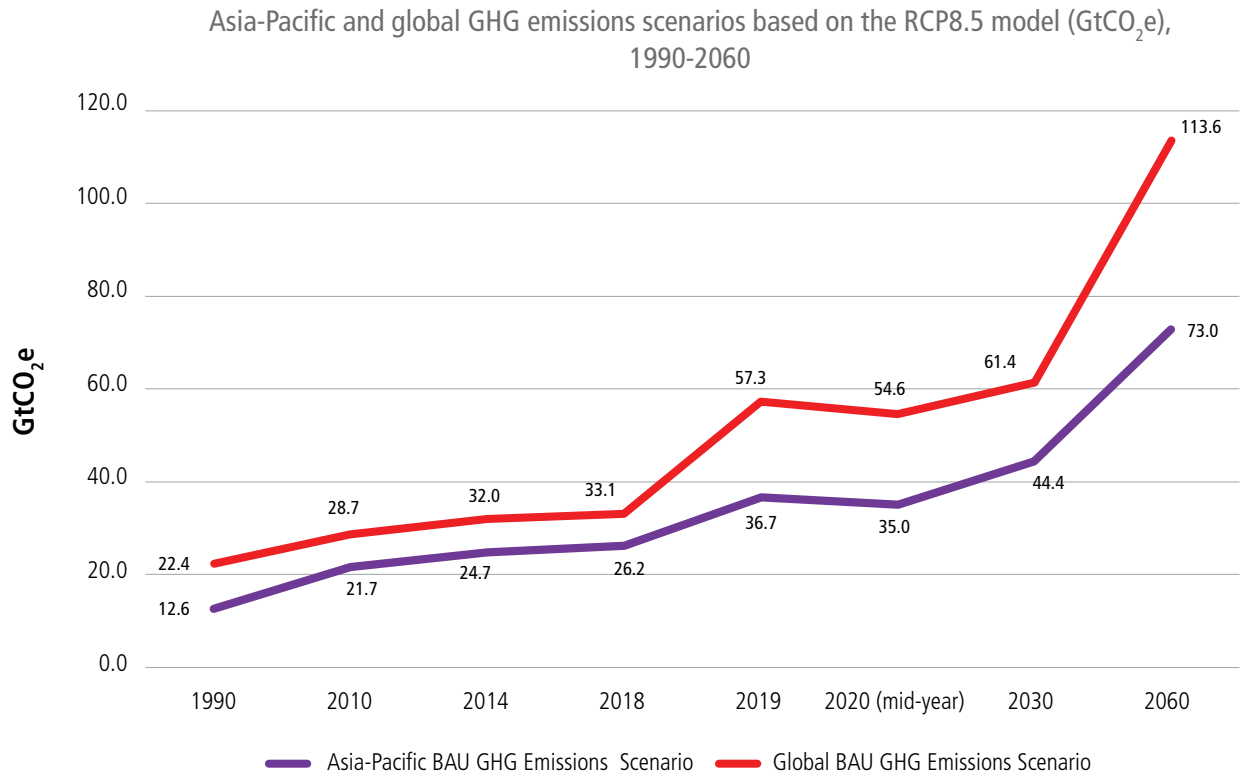
Figure 9: Asia-Pacific and global GHG emissions scenarios based on the SSP 4-8.5 model, ($GtCO_2e$), 1990-2060



Source: ESCAP.

Figure 10 below depicts the most extreme and "worst-case" scenario based on the RCP8.5 model of an exponential BAU GHG emissions projections growth for the world and the region. In this model, no NDC commitments are met, and no additional climate action is taken by any of the countries in the region. For the Asia and the Pacific region this means GHG emissions would have more than doubled from the 2020 levels by 2060.

Figure 10: Asia-Pacific and global GHG emissions scenarios based on the RCP8.5 model ($GtCO_2e$), 1990-2060



Source: ESCAP.

Carbon Neutrality Pledges in Asia and the Pacific

The GHG emissions scenario for the Asia-Pacific region (Figure 7), has demonstrated clearly that without additional carbon neutral pledges, and more ambitious NDC commitments before 2030 and after, carbon neutrality or net-zero CO_2 is not within reach of the Asia-Pacific region by 2050.

Some 34 of the Asia-Pacific member States have made carbon neutral pledges for 2050 and 2060. Table 1 provides the categorization of these pledges, which range from being a 'proposed legislation', a 'policy document', 'adopted a law', 'achieved', and those that are 'not yet considered'.

Table 1: Status of carbon neutral pledges of the ESCAP member States, August 2021 [10]

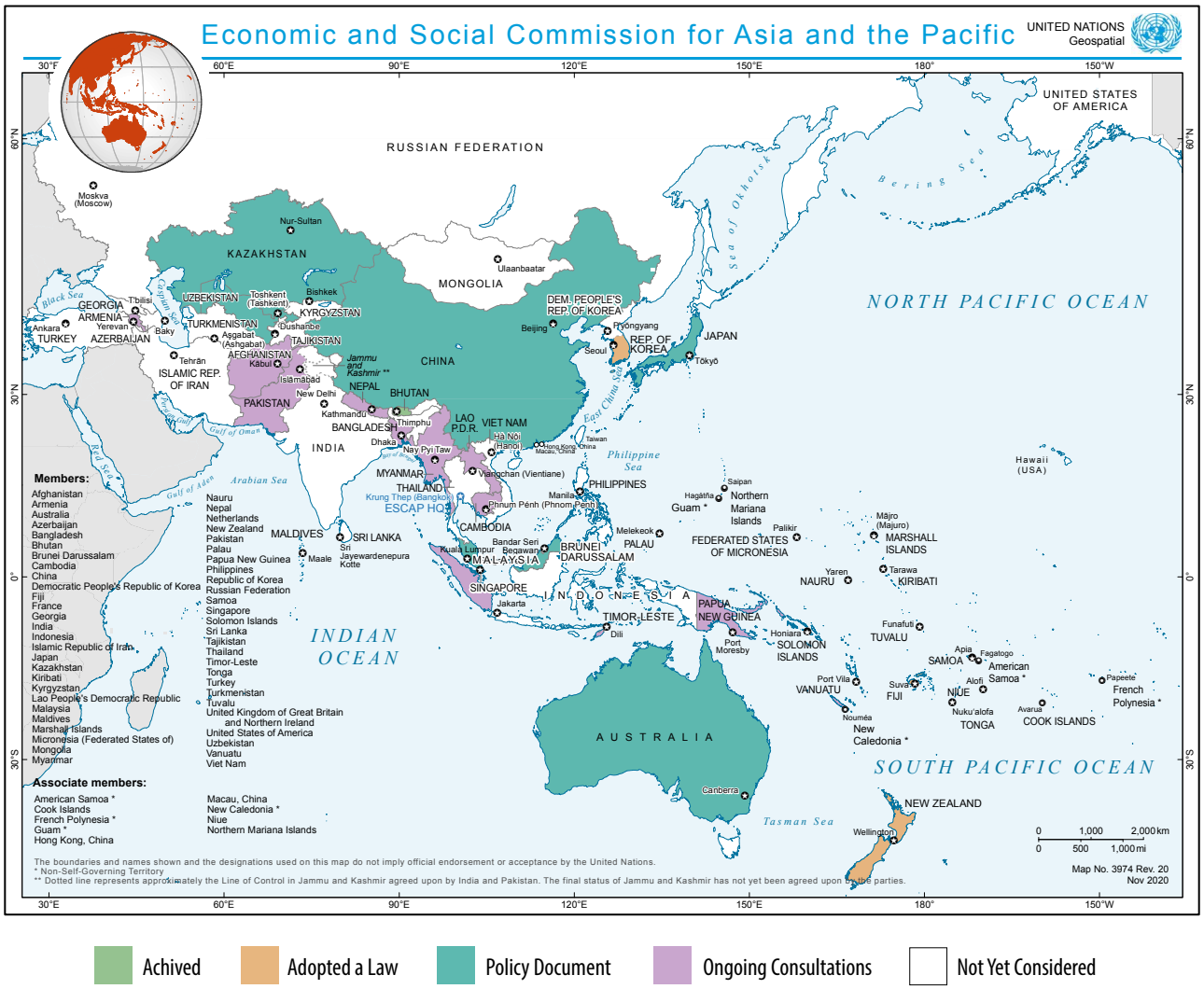
Achived	Adopted a Law	Policy Document	Ongoing Consultations		Not Yet Considered	
Bhutan	Fiji	Australia	Afghanistan	Myanmar	Azerbaijan	Democratic People's Republic of Korea
	New Zealand	China	Armenia	Nauru	Brunei Darussalam	Philippines
	Republic of Korea	Japan	Bangladesh	Nepal	Georgia	Russian Federation
		Kazakhstan	Cambodia	Niue	India	Sri Lanka
		Marshall Islands (The)	Cook Islands	Pakistan	Indonesia	Tajikistan
		Uzbekistan	Kiribati	Palau	Iran (Islamic Republic of)	Thailand
		Malaysia	Lao People's Democratic Republic	Papua New Guinea	Kyrgyzstan	Turkey
			Maldives	Samoa	Mongolia	Turkmenistan
			Micronesia (Federated States of)	Singapore	Viet Nam	
			Timor-Leste	Solomon Islands		
			Tonga	Tuvalu		
			Vanuatu			

Note: Cook Islands and Niue are associated members of ESCAP

Figure 11 illustrates the carbon neutrality pledges by the 34 Asia-Pacific member States and associated members.

10. Cook Islands and Niue are associated members of ESCAP.

Figure 11: Map of Asia-Pacific member States with carbon neutrality pledges at various stages



Source: The map is developed based on the data for the ESCAP member States from the global assessment report provided by Wallach, 2021.

There are 12 specific standout examples of ambition that are worth noting. Bhutan is already carbon neutral (Wallach, 2021), while the Maldives has set an earlier carbon neutrality target for 2030. New Zealand has issued a decree on its carbon neutrality pledge, while the Governments of the Republic of Korea and Fiji have submitted a proposed legislation to their national parliaments. Australia, China, Japan, Kazakhstan, Malaysia, the Marshall Islands and Uzbekistan have issued policy documents about their carbon neutrality pledges.

These 12 countries emitted 21.1 $GtCO_2e$ in 2019, which is the year of the highest GHG emissions for the Asia-Pacific region, representing a sizable 57 per cent of the regional emissions in that year. Furthermore, these countries have pledged, in their NDCs, a total of 9.0 $GtCO_2e$ emissions reductions by 2030, which represents 66 per cent of the regional NDC commitments. This provides a good start for these countries to successfully complete the race and achieve their carbon neutrality pledges by 2050.

Building Forward Better with Green Post-COVID-19 Recovery

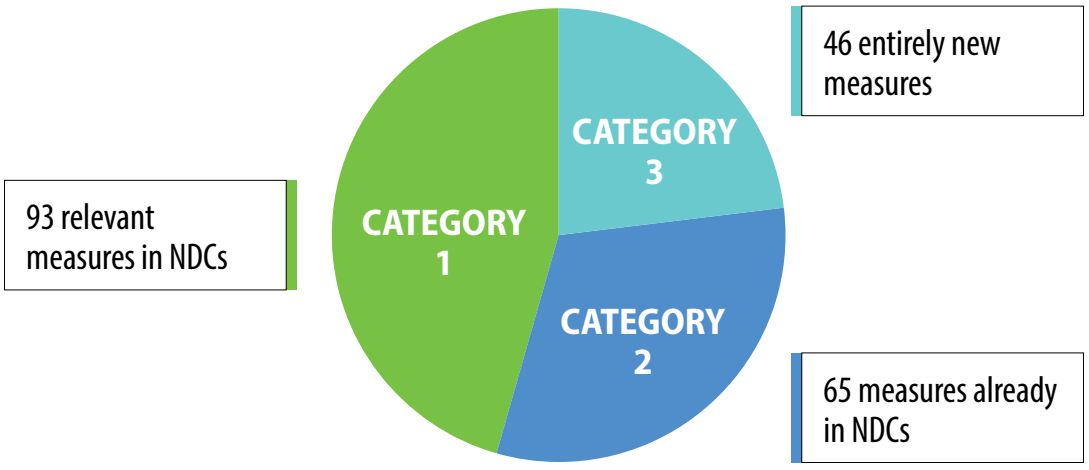
For the Asia-Pacific region to achieve full carbon neutrality by 2060, countries need to develop more ambitious mitigation and adaptation commitments in the next review and update of their NDCs scheduled for 2025. Furthermore, and to support current and future more ambitious mitigation measures NDC commitments while targeting carbon-neutrality by 2050, the Asia-Pacific member States need to considerably increase investments in nature-based solutions, which support the restoration of coastal, terrestrial and ocean ecosystem and climate adaptation, in addition to serving as a carbon dioxide sink to capture any residual GHG emissions by 2050-2060.

In the short term, member States can align current NDC commitments with green post-COVID-19 recovery and develop Long-Term Low Emission Development Strategies to support their implementation.

There is no doubt that the COVID-19 pandemic has influenced the current climate policies of Asia-Pacific countries, as well as their abilities to implement their NDCs. From the beginning of the outbreak, ESCAP monitored the responses of governments in Asia and the Pacific to COVID-19, in terms of increasing health expenditure, restricting movement, as well as implementing socioeconomic support measures to protect businesses and citizens from the "direct" impacts of the restrictions on movement, and the "indirect" impacts of economic closure outside of the region. ESCAP also conducted analysis of whether and how these measures overlap with Asia and the Pacific NDCs, and categorised those in three categories as shown in Figure 12 below, as a tool to assess the movement towards a "green recovery" in the region (ESCAP, 2021).

During 2020, Asia and the Pacific countries introduced 111 new "green recovery" measures in six different sectors. Unsurprisingly, most of the newly introduced measures addressed disaster risk management (DRM). Importantly, 58 per cent of these 111 new measures were previously in the NDCs. Thus, neither did the COVID-19 crisis derail nor did it act as an accelerator for these actions. On the other hand, the analysis also identified 93 relevant measures that were in NDCs but not yet introduced.

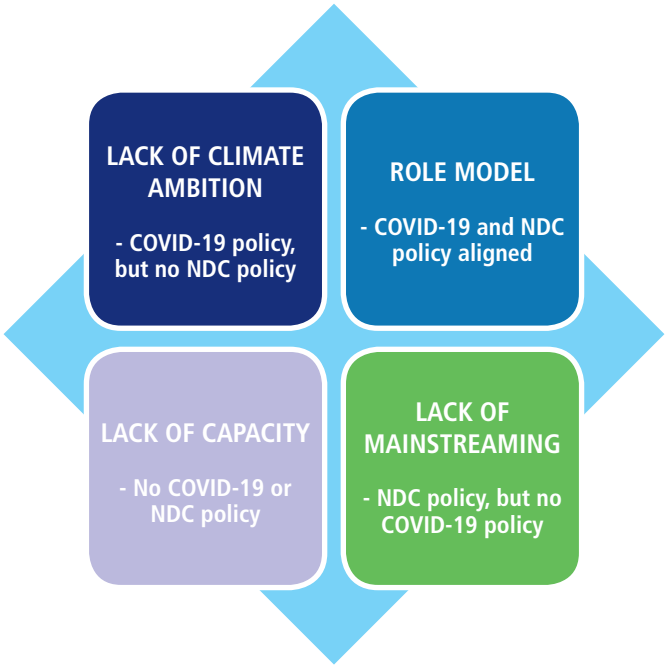
Figure 12: Three categories of "green measures" during the COVID-19 pandemic



However, the analysis also revealed that the 19 countries in the Asia and the Pacific region had introduced one or fewer "green recovery" policies, at all levels of income, although the largest emitters in the region; India, China and Japan, all seemed to be taking action.

Overall, the analysis suggests that countries in the Asia and Pacific region fall into four categories when it comes to this question of "green recovery", as described in Figure 13.

Figure 13: Four categories of Asia Pacific countries' "green recovery" from COVID-19



While this analysis was completed for data from 2020, it remains highly relevant to NDC ambition and implementation. For some of the Asia and Pacific member States, the fact that they have implemented new COVID-19 policies fairly decisively, but do not yet have NDC-related sectoral policies indicates that their governments or citizens may lack understanding of the urgency and the need for more ambitious climate action. For others, the fact that they have NDC policies that could be used as COVID-19 response measures, but have not been implemented yet, indicates that these policies are not yet mainstreamed or have not been discussed in detail with sectoral ministries and strategic planning offices. Finally, the category of countries that have neither implemented COVID-19 policies nor NDC policies in the sectors indicates a lack of financing or governmental capacity, issues which are also reflected in the analysis under enabling factors.

What Needs to be Done to Strengthen Ambition?

The analysis in this chapter suggests that despite the challenges faced due to the pandemic, 30 ESCAP member States, responsible for 33 per cent of the regional emissions in 2019, managed to submit their updated NDCs by August 2021. However, those NDC commitments represent a very low ambition in terms of mitigation and adaptation targets. Even with the current carbon neutral pledges, the Asia-Pacific region is off-track from the required 45 per cent emissions reductions from 2010 levels, that are to be achieved by 2030. There is clearly a need to build confidence at the level of national teams, who are engaged in developing and implementing NDC commitments, strategies and roadmaps, that more ambition is actually within reach and within the given national circumstances of each of the Asia-Pacific member States.

So, what can be done to enhance the ambition and strengthen implementation. The following recommendations are drawn from the analysis so far:

- **Speed up the updates of mitigation commitments of the remaining 19 NDCs, including those of China and India;**

- **Step up the implementation of the current INDC and updated NDC commitments and their alignment with green post-COVID-19 recovery;**

- **Firm commitment to the implementation of current carbon neutral pledges, develop new pledges, particularly by the major regional emitters and strengthen enabling conditions to implement carbon neutrality pledges;**

- **Develop long-term low emissions strategies (LTS) with economic and social benefits, including gender mainstreaming and support the SDGs**.

Chapters 3, 4 and 5 of this assessment report provide additional analysis and explore, in more detail, the "how" and the "what". The chapters explore elements that are required and actions that can be undertaken to support these recommendations by identifying what types of ambition can be raised, and by whom, as well as describing what kinds of enabling factors can be put in place in order to raise ambition and address the key issues identified in this chapter.

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CHAPTER 3

HOW-TO DRIVE-UP CLIMATE AMBITION IN THE REGION?

3. HOW-TO DRIVE-UP CLIMATE AMBITION IN THE REGION?

Asia-Pacific member States have begun implementing their NDC targets and some are already developing long-term low carbon development strategies. More climate action is being taken at the national and subnational levels, through mainstreaming climate mitigation and adaptation activities into national development plans, policies, strategies and roadmaps, creating institutional frameworks for horizontal and vertical coordination, engaging stakeholders, and mobilizing required resources. Important efforts are being dedicated to the elaboration of the transparency measures of the Paris Agreement for monitoring and evaluating the effects of their climate action. However, the current national climate policies and climate action measures are simply not enough to reach the 45 per cent reduction of GHG emissions by 2030, from the 2010 level.

Box 1
Why is promoting gender equality in climate action important?

Climate change is a shared responsibility where everyone matters, but its impacts are not distributed equally. Those who are most impacted by this global phenomenon are often the ones who already experience many forms of socioeconomic discrimination.

The increased recognition of the links between gender equality and climate action has resulted in more gender-responsive INDCs and updated NDCs in the region (see the NDC Synthesis report 2021). Many countries have reflected gender-related commitments and gender integration in national policy and legal frameworks, institutional arrangements and monitoring, accountability, and transparency systems with respect to the interests of people of different genders.

The integration of gender equality and human rights-based approaches in climate action has the potential to deliver on social, economic and environmental outcomes, enhancing adaptive capacities, fulfilling rights while safeguarding the needs of the most vulnerable. When it comes to gender in climate change research, recent studies suggest that empowering women through increased representation in decision-making in governments, and improving healthcare and education 'could help societies adapt more quickly and easily to the impacts of a changing climate' (Tandon, 2020). Agricultural adaptation specialists in particular report that a gender lens will 'accelerate transformation to a net zero sector'; the ability to implement climate smart agriculture is inextricably linked with reducing gender inequalities (2X Climate Finance Taskforce, 2021). Research integrating gender into climate change

scenario planning, such as the shared socioeconomic pathways (SSP) modelling described earlier in this report, underscores the relevance of addressing gender inequalities in climate change policies and plans which promote resilient development (Hausfather, 2018).

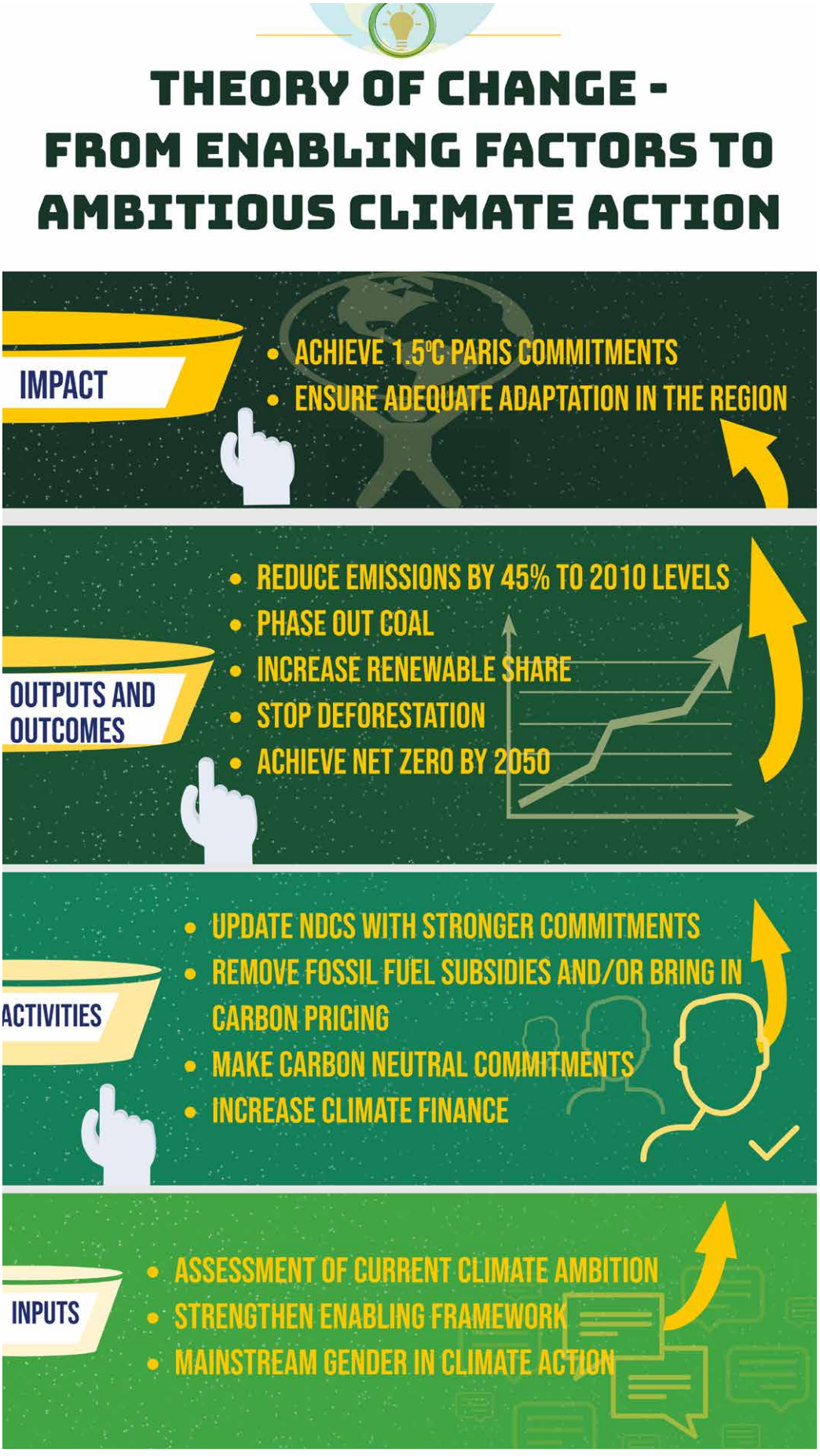
Current discussions under the UNFCCC negotiations, for the specific language in the Paris Agreement and in the implementation guidelines, highlight the increased importance of ensuring that climate action is not only more responsive to gender inequalities, but also goes further to promote gender equality and ensures inclusive climate change processes and planning. As NDCs guide the national climate policy making and investments, it is crucial that gender considerations and women's empowerment are explicitly included.

To understand what will drive change, it is important to first critically review national climate ambition using a holistic approach of, and beyond, the implementation of national mitigation and adaptation commitments, and indicators of SDG 13 on Climate Action, and how those will be supported by economic tools, such as carbon pricing instruments. It is also important to review what enabling factors will support and make such ambitious climate actions possible. In this regard it is critical to highlight that gender mainstreaming was studied as an additional key component of all four enabling factors. The results suggest that gender mainstreaming produces more inclusive and effective gender and climate outcomes, as explained in Box 1.

These enablers will support the development of long-term low emissions development strategies (LT-LEDS), carbon neutrality pledges, further updates of the NDCs and the next cycle of review and stocktake of the NDCs, as well as their effective implementation. The resulting impact will then be a full energy transition to renewables, the elimination of fossil fuel use, further reductions of GHG emission to support commitments of the Paris Agreement, and will pave the way for achieving net-zero CO_2 by 2050.

The theory of change, which has been formulated to support this process of transition, highlights the symbiotic and mutually reinforcing relationship between the level of ambition and enabling factors, including gender mainstreaming (Figure 14). This is a two-way relationship; enabling factors give countries more confidence to increase ambition, and the increased ambition, in turn, strengthens the enabling frameworks for better implementation. That is why the multilateral system should not only focus on measuring and building the ambition of countries directly, but it should also focus on building readiness through strengthening enabling factors to close the time-gap between enabling factors and ambition, and must be in accordance with national circumstances.

Figure 14: Theory of change: from enabling factors to ambitious climate action



It is important to clarify that this assessment aims to:

- **support high-level policymakers, including from ministries of planning and development, with a macro and holistic understanding of the opportunities and challenges of taking on ambitious climate action and the risks of not taking such action;**

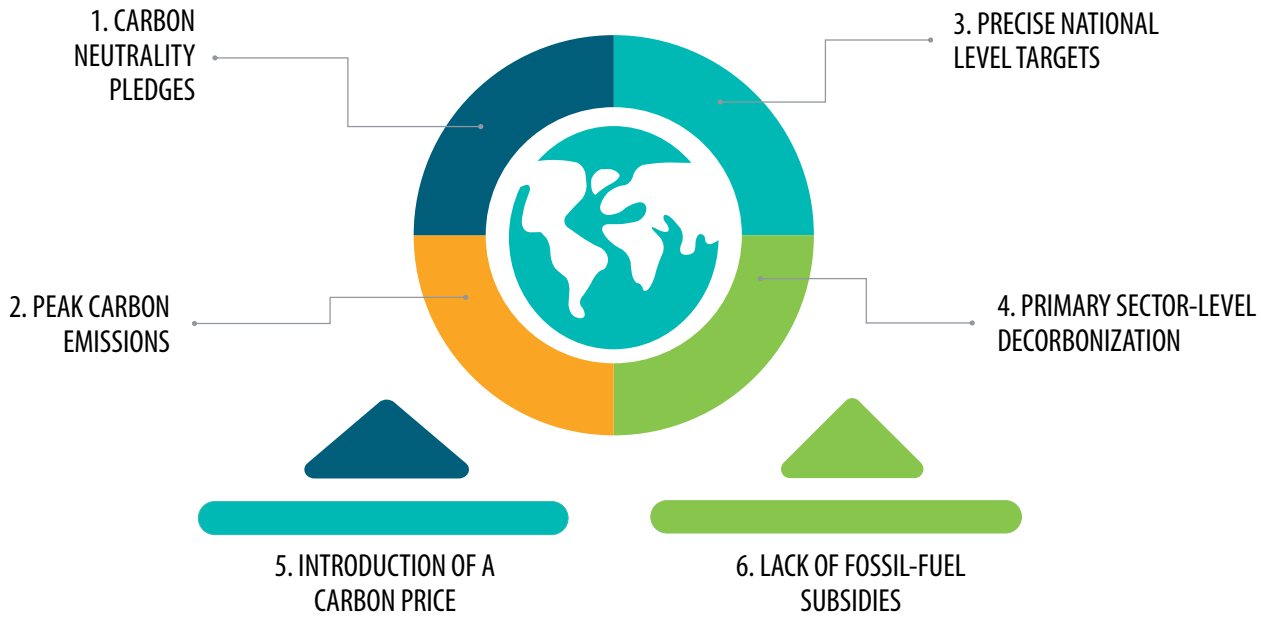
- **provide practical suggestions and ideas for building forward better and for working together to achieve the climate future we need;**

- **empower and build confidence of national policymakers in the existing margins to develop more ambitious mitigation and adaptation commitments and carbon neutrality pledges.**

So, to better analyse the level of ambition, this assessment report is taking a deep dive into six indicators and their interconnections, as shown in Figure 15, by reviewing:

- **whether there are carbon neutrality pledges and how are they being supported?**
- **when are emissions peaking?**
- **what measures are being undertaken for decarbonization nationally and in key sectors?**
- **are carbon pricing instruments and fossil fuel subsidies being used to support higher climate ambition?**

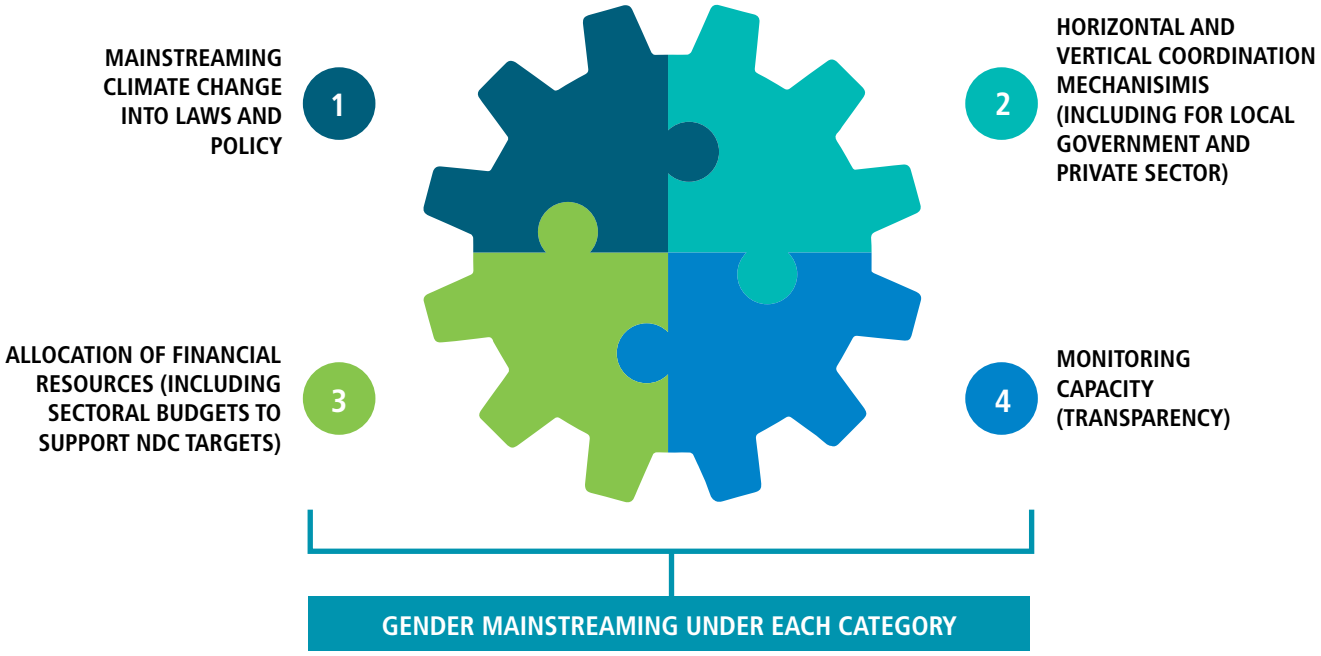
Figure 15: Six Indicators for Assessing Climate Ambition



Chapter 5 then takes a closer look into the enabling factors that will support a more ambitious climate action plan. The chapter will assess the readiness of the Asia-Pacific member States to implement current updated NDC commitments and will review their ambition in the next NDC updates in 2025 to accelerate implementation of the Paris Agreement.

The enabling factors are assessed in terms of achievement in four indicators, as described in Figure 16, with gender mainstreaming being integrated in each of the enablers.

Figure 16: Four Plus One Enabling Factors

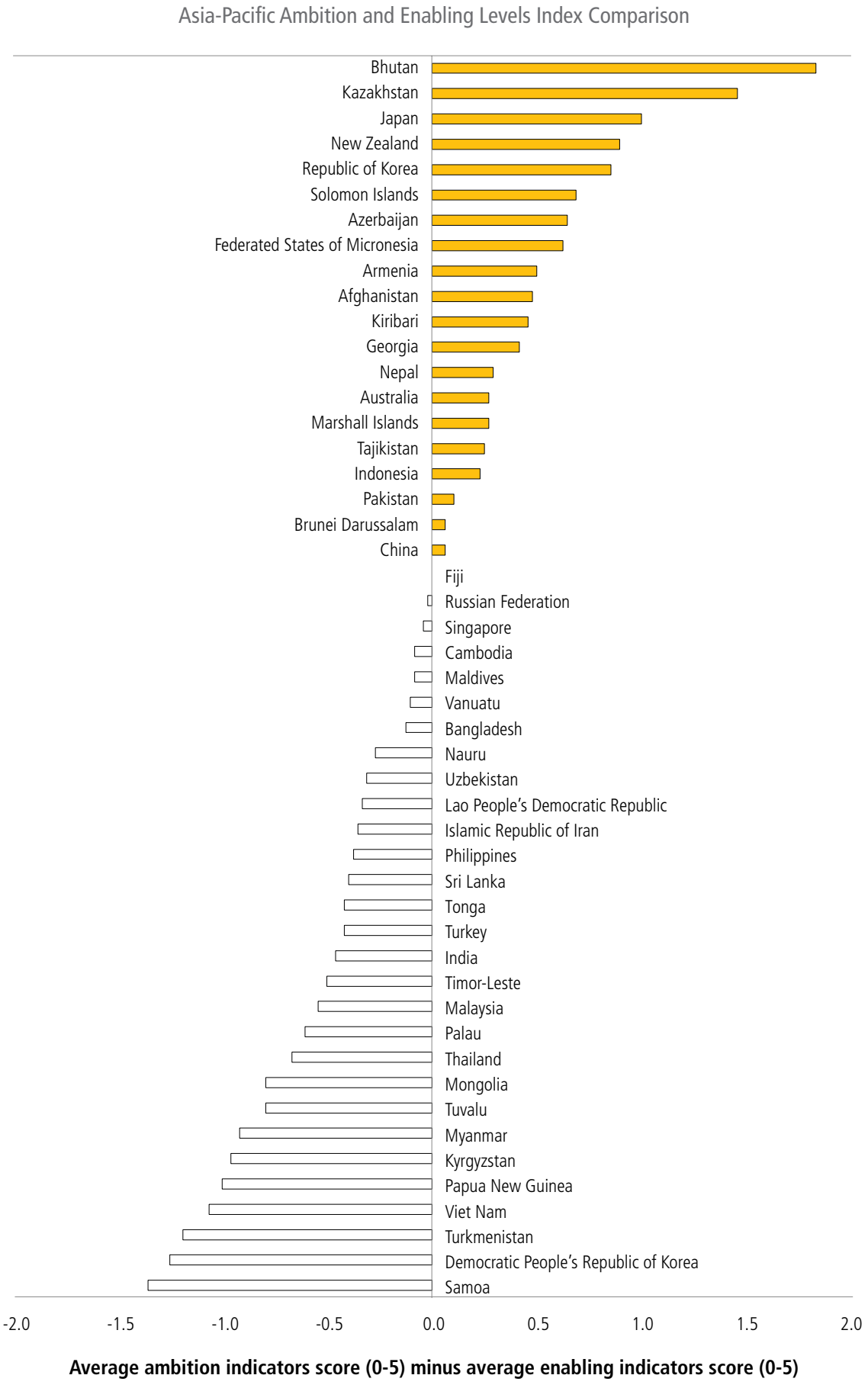


The two sets of scores on ambition and enabling are then used to derive a matrix to understand the relationship between ambition and enabling factors in the region and derive the suggestions for the way forward. The analysis is described in detail in Annex I of this assessment report, which is published separately. Figure 17 provides the ranking of countries in the Asia-Pacific region according to their ambitions and enabling levels. The figure illustrates – from top to bottom - that a number of countries are effectively "exceeding" ambition in terms of the enabling factors they have. These are the countries that can share lessons about moving ahead with others in the region.

The figure also illustrates – towards the bottom of the figure - several countries that have clearly worked very hard to create enabling factors to increase their potential for ambition, but have not yet – according to this analysis – demonstrated that ambition.

The countries "in the middle" are broadly matching ambition with the enabling factors they have worked on, and hopefully can continue to build on this by improving on their enabling factors, such as transparency and coordination, as explained in Chapter 5.

Figure 17: Asia-Pacific Ambition and Enabling Levels Index Comparison



Source: ESCAP.

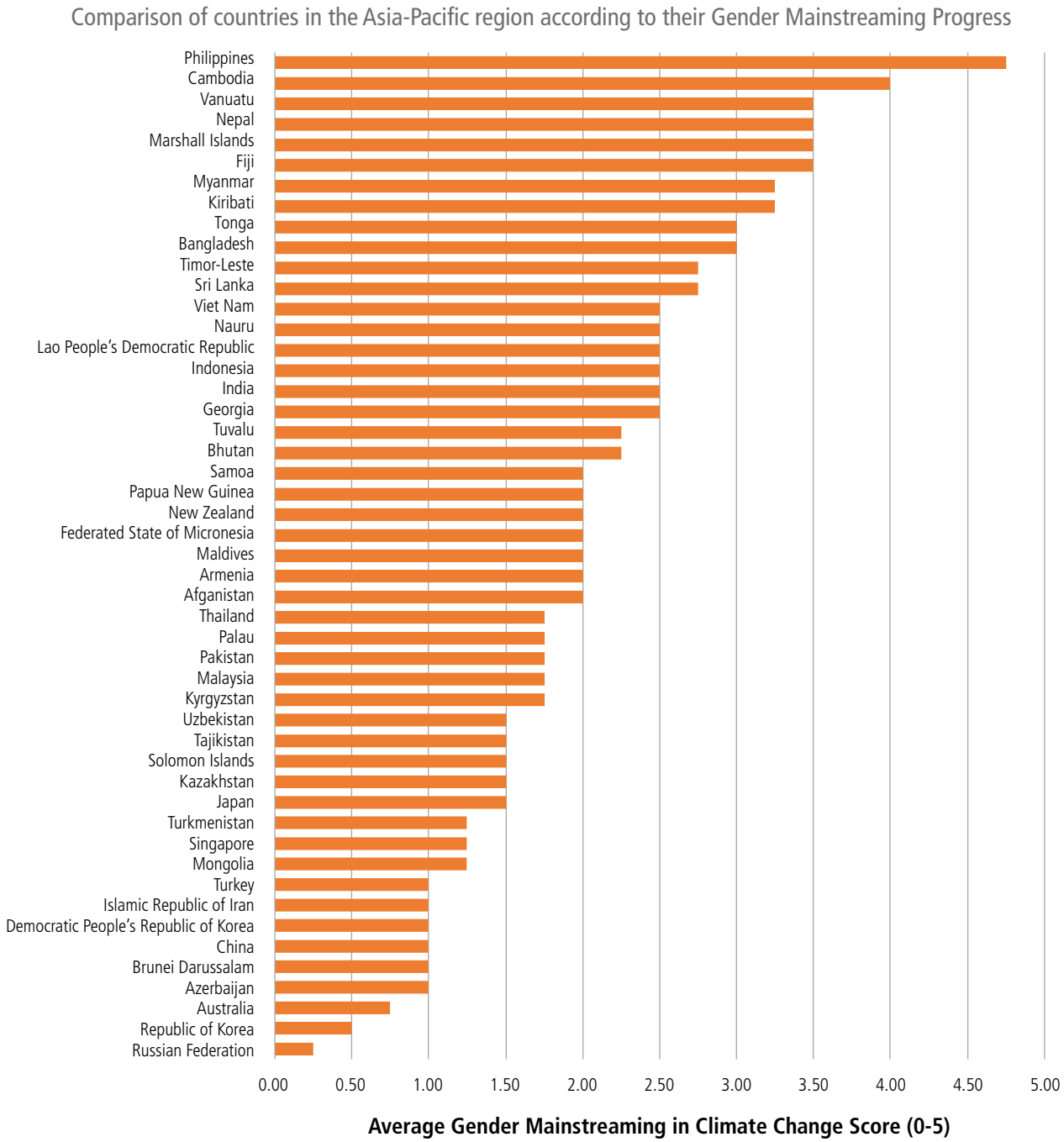
The highlight of this analysis is that higher ambition is not a privilege of the high-income countries in the region. The 20 countries in the region, including Solomon Islands, Kazakhstan and the Republic of Korea, that have an abundance of ambition in comparison to the level of their enabling factors, are countries with both high and low-incomes, with large and smaller land-coverage and varying population densities. These countries could be described as the most "ambitious", relative to their enabling factors. Other countries, including Singapore, India, and Turkey, with very solid enabling conditions demonstrate insufficient "ambition", and should consider exploring their potential for increasing climate mitigation and adaptation commitments, while setting a good example for other countries in the region.

However, the majority of countries in the region, and at all levels of income, have an abundance of enabling conditions to help drive up their climate ambition. Among such countries, for example, are Vietnam, Thailand and Malaysia which, despite seeming ready to forge ahead with high mitigation commitments, have been modest in their planned GHG emissions reductions.

There is also a group of countries that have not managed to develop their enabling conditions to the fullest and that has also prevented them to demonstrate higher ambition. These countries, among which are the Democratic People's Republic of Korea, Turkmenistan, and Samoa, need to make considerable efforts and will require significant support from more advanced countries in region and the international community, including the UN system, to build forward better.

Across the board, gender mainstreaming is crucial. Certain countries lead the way in mainstreaming gender into climate change action, as shown in Figure 18. Philippines, Cambodia and Vanuatu, in particular, stand out for their progress, while countries, such as the Republic of Korea and China could improve significantly, given their leadership positions globally.

Figure 18: Comparison of countries in the Asia-Pacific region according to their Gender Mainstreaming Progress



Source: ESCAP.

Furthermore, if gender mainstreaming and increased gender-responsive climate action is strengthened across all of the enabling factors, the result is more effective climate action which can also catalyse increased climate ambition.

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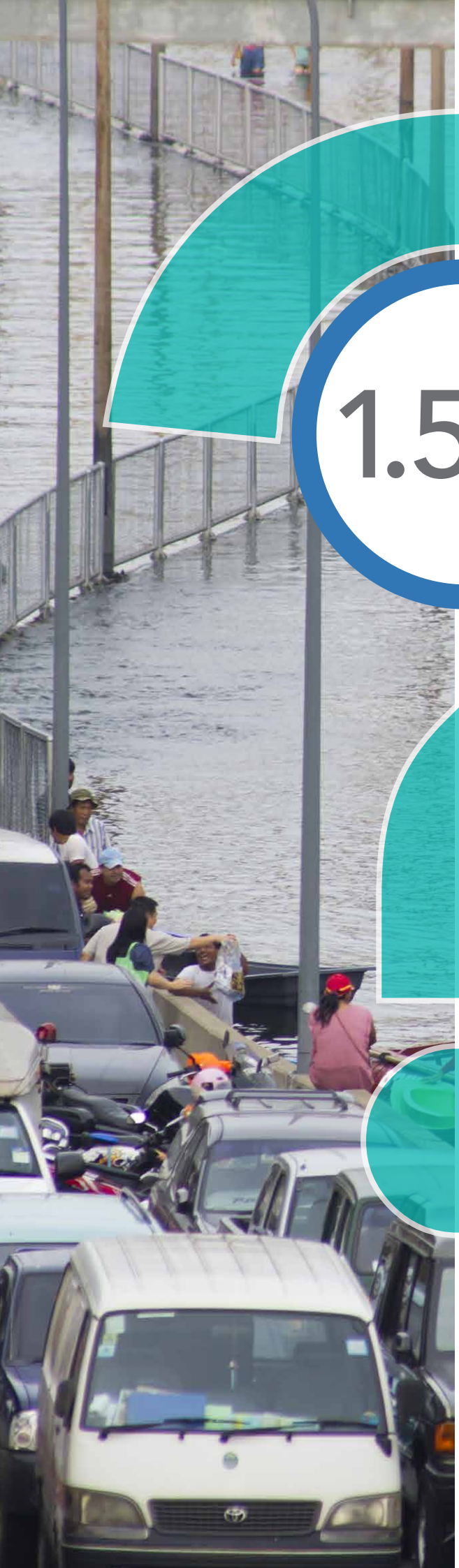

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CHAPTER 4

ASSESSING COUNTRY-LEVEL CLIMATE AMBITION

4. ASSESSING COUNTRY-LEVEL CLIMATE AMBITION

While NDCs and overall emission reduction targets are seen as the key means for countries to express their ambition, each economy is different, and in reality, the transformation of economies can take place through various interrelated actions. Furthermore, there are some specific policy measures, such as carbon taxes or emissions trading, that, once in place, can enable a steep ramping up of ambition, and others that hinder ambition, such as fossil fuel subsidies. These are all critical to understand, and countries across the region can watch and learn from each other as they move ahead.

Specifically, ambition can be measured using at least six indicators as described in Figure 16 (see Chapter 3). The specific data and methodology used for "scoring" of each indicator is set out in Annex I to this publication that will be published separately.

It is important to note that not all of these measures of ambition are expressed in all NDCs for countries in the region, including those that have been introduced and associated with the COVID-19 response and recovery. Thus, this analysis incorporates announcements beyond NDCs.

Furthermore, while each indicator cannot be used on its own, by combining the indicators it is possible to get a more holistic picture of the country's ambition – or determination – to act on climate change. In this regard, this report goes beyond analysis of whether countries have met their climate change targets or not; or met SDG 13 targets or not. The analysis in this report looks further than the targets themselves. These six indicators are briefly described below.

First, carbon neutrality pledges are the most comprehensive commitment a nation can make. Of course, a comprehensive decrease in emissions is preferable to a policy that relies heavily on offsets, but in recognizing the realities of different nations, within the Asia-Pacific region, net-carbon neutrality is a strong metric in determining overall ambition. However, some countries have not yet made such commitments, but this does not mean they are not ambitious.

The second indicator explores the degree to which a country is planning to peak emissions, which can help to distinguish the ambition of that country, with regard to having intensity-based targets in particular. The longer a nation takes to reach its peak, the longer it will take for global emissions to decrease.

The third indicator, classification of targets at a national level, is essential in understanding the certainty of commitment a nation has in terms of its GHG emissions targets. For instance, the BAU scenario or intensity-based targets can be seen as less ambitious because of possible discrepancies in establishing BAU baseline years and varying methods of calculation, leading to a possible underestimation of the potential of mitigation. Absolute emissions reduction targets, or pre-1990 baselines, are more measurable. Furthermore, though this report recognizes the different abilities countries have to combat climate change, as a result of a lack of financing capabilities and other inhibitors, aggressive unconditional commitments demonstrate a higher level of dedication to mobilizing existing finance for climate change mitigation.

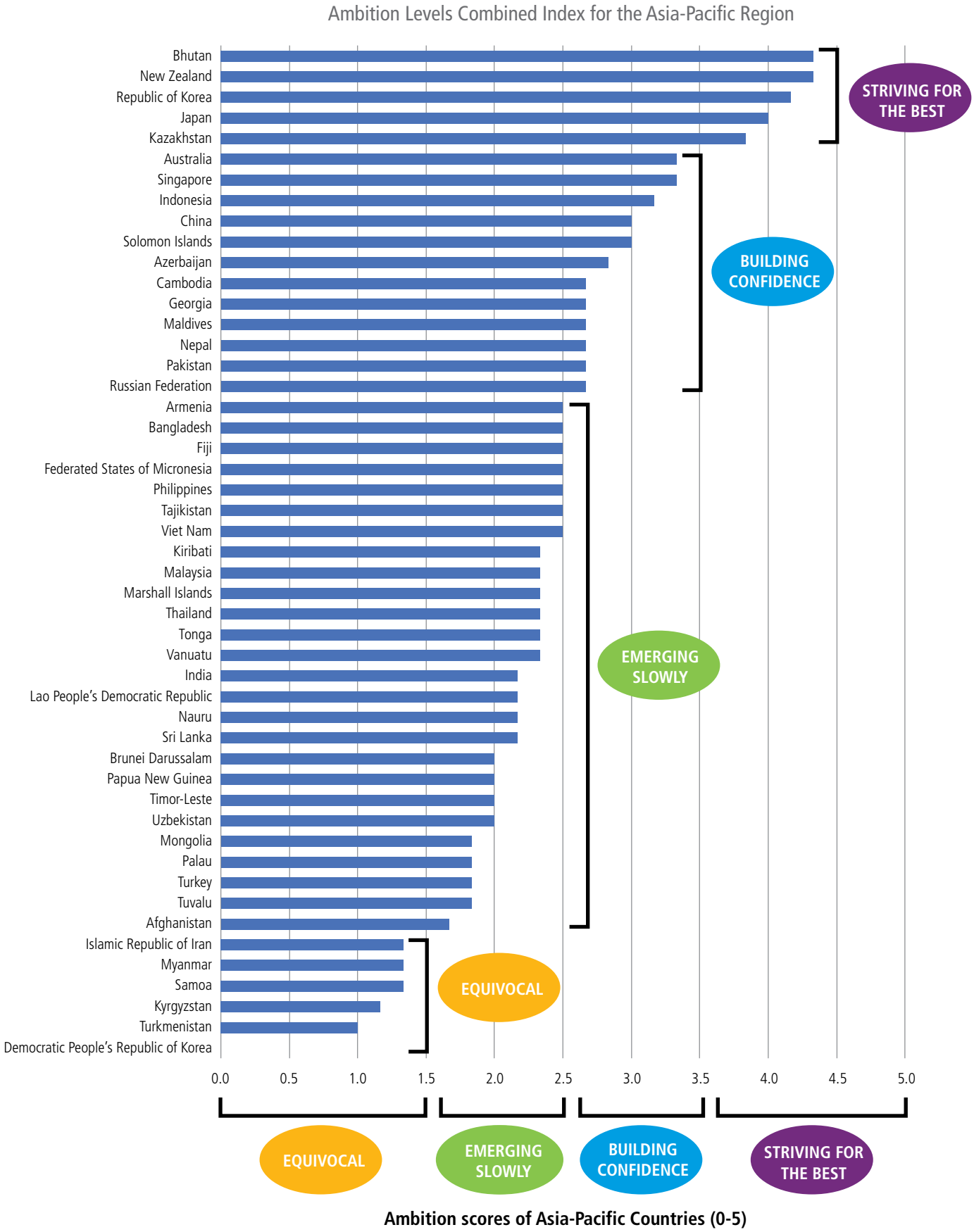
Fourth, the degree of decarbonisation of top emitting sectors, within a nation, is crucial in determining progress. For instance, the energy sector often makes up a large proportion of GHG emissions, but also holds great potential for mitigation and adaptation measures. Therefore, it is essential to specifically examine the policies that nations have in place for increasing renewables in their energy mix and encouraging investment into alternative energy sources. Having renewable energy targets, plans and funding mechanisms in place to integrate hydro, wind, solar, and other energy sources into the energy mix are essential for a comprehensive national strategy. Similarly, many Asia-Pacific nations face exacerbated environmental threats because of deforestation. Thus, decreasing deforestation is essential not only for revitalizing ecosystems and ensuring future biodiversity, but also to lower flood and drought risks by helping regulate rainfall and other water flows.

Fifth, market mechanisms such as carbon pricing (taxes) and emissions trading schemes are key avenues for climate mitigation and can provide an indication of the extent of a nation's ambition in utilising a wide range of tools to act. Market mechanisms can also enable ambition. They catalyse private involvement in mitigation and adaptation measures and ensure a structure of incentives for decreasing GHG emissions. Furthermore, as outlined in the NDCs of several countries, revenues from carbon pricing instruments can also be targeted or "hypothecated" to be utilized as a form of climate finance, further ensuring the implementation of policies to meet both conditional and unconditional targets. The carbon price itself on a national level can further highlight the country's dedication to ensuring that investments are innovative and incentivized to search for cleaner solutions.

Sixth and finally, the existence and extent of fossil-fuel subsidies in Asia-Pacific countries is also an important indicator of ambition. When fossil-fuel subsidies are large in comparison to the economy, it suggests that countries are allowing huge distortions of the market forces and may face significant challenges in reducing them in the future.

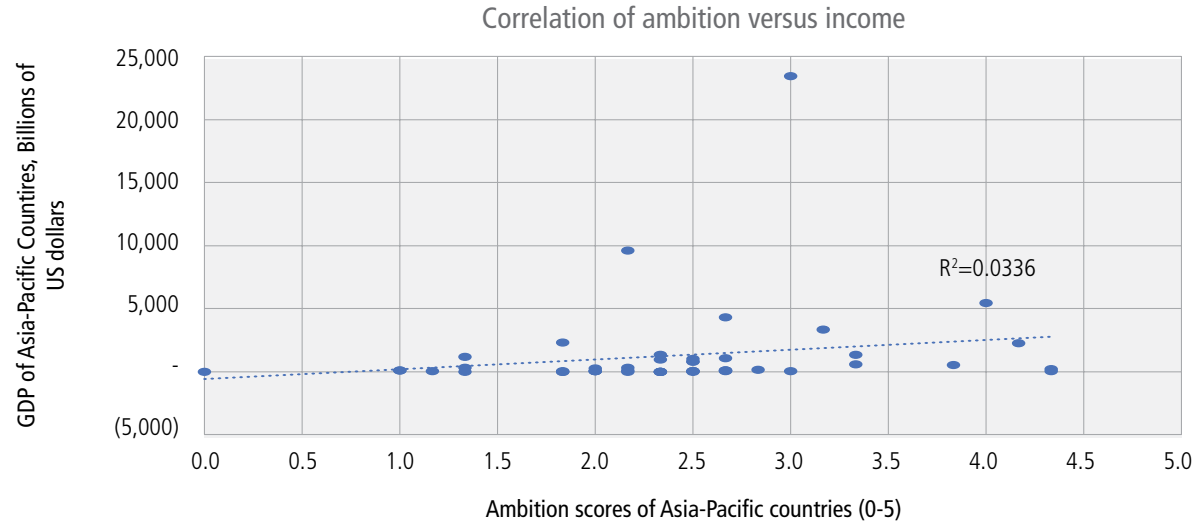
The results of combining the analysis of these six indicators by country, weighted equally, are shown in Figure 19. Based on the holistic analysis of NDCs, pledges and actions beyond NDCs, the figure shows clearly that the majority of Asia-Pacific economies fall into the "emerging slowly" category when it comes to ambition.

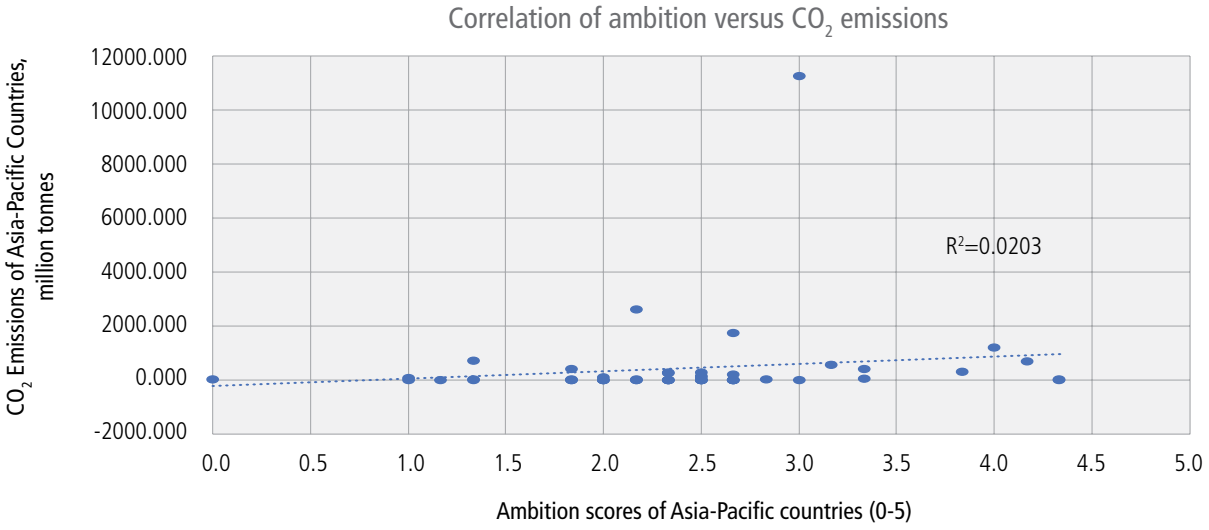
Figure 19: Ambition Levels Combined Index for the Asia-Pacific Region

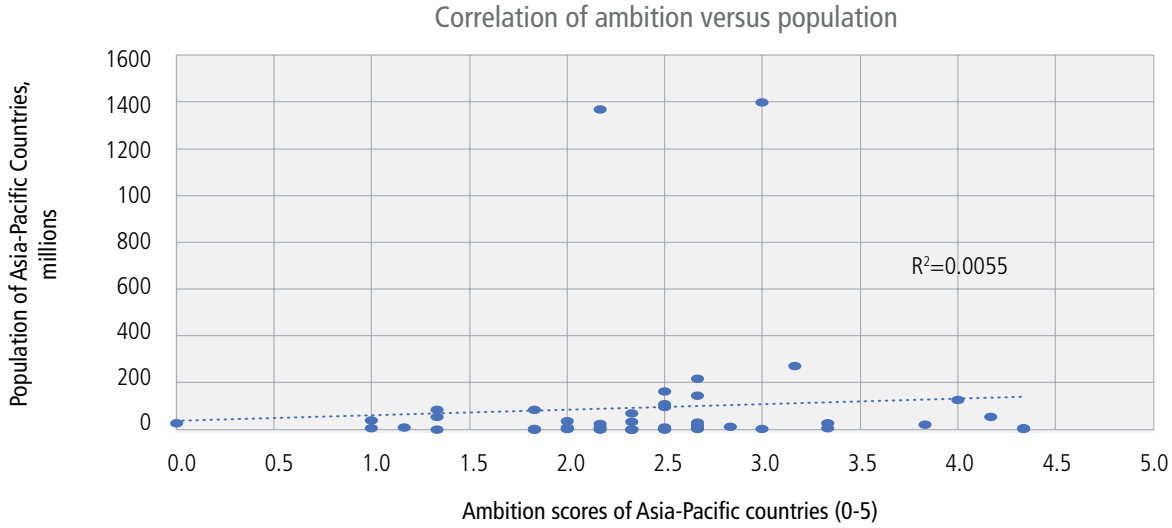


These indices can also be analysed against income (GDP), CO_2 emissions and population to assess whether these results are driven by such factors. These correlations are shown in Figure 20.

Figure 20: Correlation of Ambition with other variables







The graphs show very little correlation. That is, ambition is not determined by income, by population or current emissions. For instance, income only explains 4 per cent of the variation in ambition scores. That is, many other factors aside from a country's income explain ambition, as captured by

the six indicators. There are several countries that have high income and low ambition, several that are low income and have high ambition. As per the theory of change in Chapter 3, there must be other drivers for these results.

But it is important to understand what is meant by ambition, and what do the six indicators of ambition really mean? This is explained in more depth below through comparisons and case studies.

Working towards Carbon Neutrality

First, when it comes to carbon neutrality, as described in Chapter 2, there are several standout examples in the region. A further 24 nations have signed the Climate Ambition Alliance, pledging to reach net-zero CO_2 by 2050. However, 14 countries have still made no such pledges on any timescale, including India. This indicates significant gaps in ambition.

The comparison between Australia, India, and New Zealand (Box 2) illustrates the challenges in discussing future ambitions and carbon neutrality pledges.

Box 2
How do the carbon neutral pledges of Australia, India and New Zealand vary?

At first glance, there is a huge contrast between India and the two Australasian countries – Australia and New Zealand – when it comes to carbon neutrality pledges. Both New Zealand and Australia have proposed, or at least vocally expressed a carbon neutrality pledge by 2050 or after 2050, while India has not yet released any plans of such. However, Australia and New Zealand also differ strongly. In late 2020, the Government of New Zealand declared a climate emergency and aimed to achieve carbon neutrality in every public sector by 2050. Combined with the former Zero Carbon Bill, the carbon neutrality approach taken by the Government of New Zealand represents a further level of progress (Menon, 2020). Unlike New Zealand, all six federal states of Australia have issued their carbon neutrality pledge by 2050, however, the central Australian Government has not yet firmed this in policy, and in particular no information has yet been released of a clear carbon neutrality plan from the Government of Australia (Argus Media, 2021). For both Australia and India, a key issue is the use of coal. In 2019, Australia's coal mining industry alone employed more than 58 thousand people (Australian Industry and Skills Committee, 2021). In India, the coal mining and power generation sector, excluding the transport sector, directly employed around 0.5 million people (Australian Government, 2019). However, the issue for India is compounded by relatively low energy access (though by no means the lowest in the Asia-Pacific region). Hence, while the Government of India has been hiking up the tax on coal, it is taking a "pragmatic approach", and has not yet issued an official carbon neutrality pledge. However, like Australia and New Zealand, the discussion is taking place in parliament, with some parliamentarians arguing that a goal of zero carbon by 2050 or 2047 would be in the country's interest, especially when it comes to new investments (Miglani, 2021).

Peaking Carbon Emissions

Second, when it comes to peaking per capita emissions, 10 countries have already peaked emissions. These are Australia, Azerbaijan, Bhutan, Georgia, Kazakhstan, the Federated States of Micronesia, Nauru, the Russian Federation, the Solomon Islands, and Tajikistan. However, almost half of Asia-Pacific countries are not willing to commit to a peak emissions date, including large emitters, such as Indonesia, Turkey, the Islamic Republic of Iran and India. Box 3 illustrates how many peaking scenarios are dependent on plans to phase out the use of coal, especially in industry. China's level of ambition on this metric is similar to that of Fiji and the Marshall Islands. That said, for several of these countries, a net-zero trajectory and/or a stronger NDC target would put their peak emissions date as already past or imminent.

Box 3
How does progress on peak emissions of China, Japan and the Republic of Korea vary?

In terms of the peaking per capita emissions, three north-eastern countries, China, Japan, and the Republic of Korea, provide an interesting comparison. Among the three, China still expects to reach its carbon emission peak by 2030, while both Japan and the Republic of Korea reached their peak around 2020. In September 2020, the Government of China announced its ambition to reach carbon emission peak by 2030, and carbon neutrality by 2060. However, due to the pandemic and economic uncertainty, the stimulus policies so far could be carbon-intensive with a growing demand for energy and China's currently coal-oriented power generation. More plans are expected to be launched by the Government of China, as China has stated that it is promoting an industrial transition and especially, the development of the renewable energy industry (Climate Action Tracker). In the case of the Republic of Korea, even though it reached its emission peak around 2020, it is estimated that the carbon emission will again grow as the whole economy tries to recover from the pandemic, and the direction of the coal power industry in the Republic of Korea remains uncertain (Renewables Now, 2021). However, in comparison to China and the Republic of Korea, Japan has explicitly announced its 2030 NDC target to phase out inefficient coal-fired plants. Tackling this alongside COVID-19, the Government of Japan has prepared a "green recovery policy", aiming to further transition the national economy to one that is more eco-friendly (Shibata, 2010).

Setting Ambitious National Targets

When it comes to classification of national targets, the results suggest that within the region, there is a fairly even score of all types of targets, with the majority favouring BAU targets or targets that relate to an "increase" of green-friendly activities, rather than committing to cut emissions, even by a small percentage, within the entire economy or even within an entire sector. That said, there are few countries in the region with conditional targets, which mean that these countries are largely making their commitments independent of international climate finance commitments.

Box 4 provides the example of Fiji, that has found ways to be as certain as it can be and ambitious, despite having a BAU target, based on mainstreaming and coordination at the highest levels of government, and illustrated by some of the innovative climate finance tools that it is using.

Box 4
Fiji – A small country with a big long-term vision

Introduction

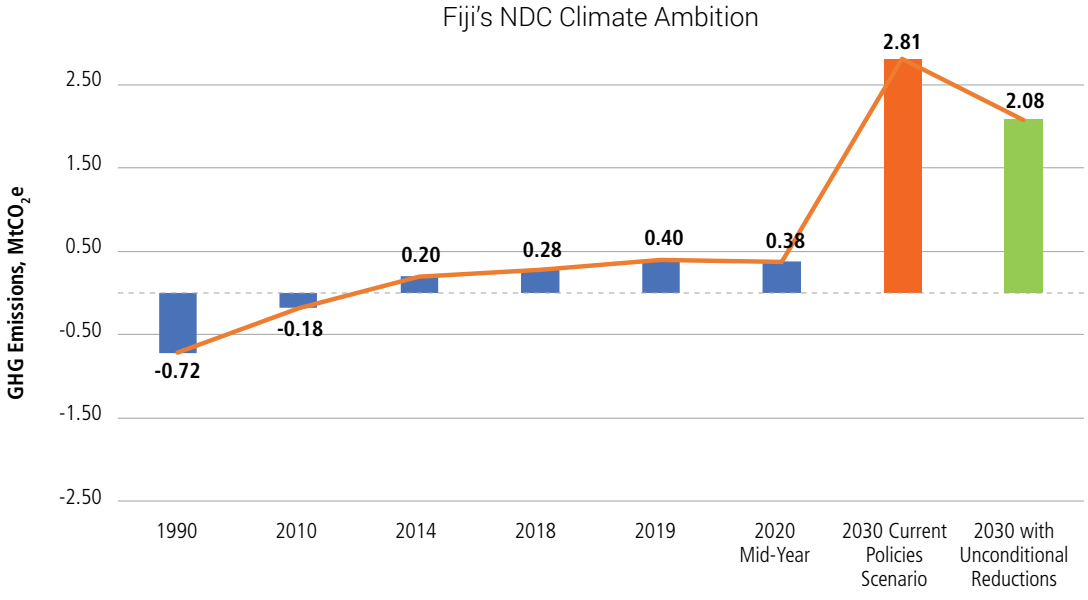
Located in the Pacific subregion, Fiji consists of 332 islands, around 110 of which are inhabited, with a total population of 939,535 people (2021). Endowed with forests, minerals, and fish resources, Fiji is one of the most developed of the Pacific Island economies. Its economy is predominantly service based with a high dependence on tourism (CIA World Factbook, 2021, and Republic of Fiji, 2020b). Fiji is an important ambassador for climate challenges faced by the Pacific SIDS (COP23, 2017b), and announced during its COP presidency the introduction of the first Gender Action Plan under the UNFCCC, highlighting the important role of women in climate action and, promoting an increase in women in all UNFCCC processes (COP23, 2017a). The island wants to lead by example with ambitious climate targets and actions, for example, by issuing the first developing country Green Bond raising US$ 50 million for climate resilience (World Bank, 2017).

Overview of Climate Change Impacts

Due to its geographical location, Fiji is highly exposed to extreme weather events, such as cyclones and floods, which have major implications for the economy and livelihood of people and are predicted to increase due to climate change (Republic of Fiji, 2020b, and Climatelinks, 2021). In 2016, Fiji was hit hard by tropical cyclone Winston, which had severe impacts on lives and the economy. Climate change is also expected to further affect Fiji´s coastal resources, mainly by raising temperature in the marine environment and through rising sea levels. These effects may be enhanced by El Niño (La Niña) events in which climatic conditions are getting drier and hotter. Further projections indicate with high confidence that ocean acidification will continue, which contributes to the increase of coral bleaching with negative implications for biodiversity and livelihoods (Climatelinks, 2021).

Historic GHG Emissions Trends and BAU Projections in the Country

Compared to the global level, Fiji´s GHG emissions are minor (0.006 per cent to total global GHG emissions) (Republic of Fiji, 2020a). In 2018, GHG emissions in Fiji were about 283.41 kt CO_2e, with the energy sector being the main source of emissions (2.15 Mt CO_2e), followed by agriculture (368.61 kt CO_2e), industrial processes (171.85 kt CO_2e) and waste (130.06 kt CO_2e). The land use, land-use change, and forestry (LULUCF) sector serves as a CO_2 sink, having reduced GHG emissions by 2.54 Mt CO_2e, in 2018 (Climate Watch, 2021). As the figure below outlines, GHG emissions have remained reasonably constant over time. While Fiji already has a large share of renewable energy (RE) (67 per cent of overall energy generation in 2020, mainly hydro and wind), the transport sector is still highly dependent upon imported fossil fuels (Climate Watch, 2021). Concerning projections on the future development of Fiji's emissions, the 2030 business-as-usual (BAU) scenario foresees an emission level of 2.5 Mt CO_2e (Republic of Fiji, 2020b).



NDC and Current Climate Policy Ambition

Fiji submitted an updated NDC at the end of 2020 (Republic of Fiji, 2020a). It also has a net-zero GHG goal by 2050. Key measures on mitigation and adaptation in the NDC are set out in the table below.

Table: Targets set out within Fiji's updated NDC

	Target	Sector focus / measures
Mitigation	• Reduce 30% of BAU CO_2 emissions from the energy sector by 2030 • Of the 30% reduction of BAU baseline CO_2 emissions, 10% will be achieved 'unconditionally' using available resources in the country and 20% achieved 'conditionally', relying on external support • Commitment to achieve net-zero greenhouse gas emissions by 2050	**Renewable energy:** • Reach close to 100% renewable energy power generation (grid-connected) by 2030, thus reducing an expected 20% of energy sector CO_2 emissions under a BAU scenario. **Energy efficiency:** • Reduce energy sector CO_2 emissions by 10% through energy efficiency improvements economy-wide, implicitly in the transport, industry, and electricity demand-side sub-sectors. **Transport:** • Reduce domestic maritime shipping emissions by 40%.
Adaptation	• Adopt Climate Smart Agriculture practices, with emphasis on the promotion of sustainable practices in crop management, livestock and sugarcane farming and fisheries. • Enhance resilience by upgrading, repairing and relocating new and existing critical public infrastructure. • Develop simplified and standardized early warning and monitoring systems and prioritize nature-based solutions to mitigate the impact of flooding and cyclones. • Relocate highly vulnerable communities and implement the concept of 'build back better'. • Build strong healthcare system by implementing the 'Guidelines for climate-resilient and environmentally sustainable health care facilities in Fiji'. • Conserve natural environment and biodiversity wealth enabling sustainable long-term provision of ecosystem services, including carbon sequestration potential. • Plant 30 million trees by 2035. • Establish 30% of our Exclusive Economic Zones (EEZ) as Marine Protected Areas and work to-wards 100% management of our EEZ by 2030 through the implementation of the National Ocean Policy.	

Source: Republic of Fiji (2020)

Generally, Fiji has elaborated a broad set of policies, strategies and plans that target climate aspects (including for adaptation, climate finance and long-term climate strategies), as well as energy sector related issues, that correspond with the NDC. These policies, strategies and plans comprise of (Republic of Fiji, 2020a):

- 5-Year & 20-Year National Development Plan 2017
- Fiji Low Emission Development Strategy 2018-2050
- Fiji´s National Adaptation Plan 2018
- Green Growth Framework 2014
- Environment and Climate Adaptation Levy (ECAL)
- Fiji National Climate Change Policy NCCP 2018-2030
- Draft Energy Policy 2013
- Draft Energy Strategic Action Plan 2013

- Sustainable Energy for All (SE4All) global report
- Fiji Electricity Authority draft Power Development Plan Electricity Act (Cap.180)
- Clean Development Mechanism Policy Guideline 2010
- National Energy Policy 2006
- Natural Disaster Management Act, 1998

Fiji has also set up an NDC Implementation Roadmap and is in the process of finalizing further supportive strategies (e.g. NDC Investment Plan and Projects Pipeline, Fiji's Technology Needs Assessment, SDG7 Roadmap, review of the Fiji Energy Policy) (Republic of Fiji, 2020a).

Enabling Factors for Raising Climate Action in the Future

Apart from the targets and measures identified in the NDC, Fiji is undertaking the following actions in relation to enabling future climate ambition. The lists of policies and plans set out above, illustrate that Fiji is highly engaged on mainstreaming NDC targets within its landscape of policies and strategies. The major coordination body for climate change, including the NDC, is the Climate Change and International Cooperation Division (CCICD) of the Ministry of Economy. The CCICD is guided by the National Climate Change Policy (NCCP) and works in collaboration with government agencies, non-governmental organizations, regional and international agencies and development partners (Regional Pacific NDC Hub). Another relevant body is the Low Emission Development Strategy Steering Committee - a coordination mechanism for Fiji's Low Emissions Development Strategy comprised of Senior Government Officials from relevant Ministries and Public Utilities. Fiji is also active in the Regional Pacific NDC Hub. Fiji has also been innovative when it comes to mobilizing finance for climate. For instance, Fiji has introduced the Environment and Climate Adaptation Levy (ECAL) (Republic of Fiji, 2020b, and Climatelinks, 2021), which is a tax levy on certain services, items and income that aims to generate a domestic revenue stream to finance activities programmed in the national budget to address climate change and environmental conservation. The ECAL was introduced in the fiscal year 2017-2018, and by mid-2019 it had already collected approximately US$ 120 million, which were channeled to 102 project activities. Another financial instrument is the Fiji Sovereign Green Bond, which was issued in October 2017 and raised U$S 50 million to support climate related projects in Fiji, including solar home systems for rural electrification (World Bank, 2017). For the future, Fiji is in the process of finalising the NDC Investment Plan and Projects Pipeline to attract more private climate finance (Republic of Fiji, 2020a).

When it comes to gender, Fiji's NDC and climate-related policies identify links between gender equality and climate change and promotes gender-responsive climate action as a key policy pillar across both adaptation and mitigation activities. Fiji also recognizes the importance of increasing the number of women in environmental decision-making and includes targets for gender balance in the NAP Steering Committee as well as appointees to the National Ocean Policy Steering Committee. Importantly, the NDC notes that Fiji will take appropriate steps to protect its social infrastructure against climate change, which includes prioritizing gender, disability, children, and the elderly in climate action (Republic of Fiji, 2020a).

What can other Countries Learn from this Country to Raise Ambition?

Despite being a very minor contributor towards global GHG emissions, Fiji has shown great leadership in defining targets and measures for climate action, including a commitment to achieve 100 per cent renewable energy supply. Since the COP23 Presidency, it has also established itself as an important voice for the Pacific SIDS supporting the visibility of adaptation needs. Further lessons for other countries include the efforts by Fiji to mainstream the topic of climate change across all sectors and strategies, to have a long-term view on climate change with a strategy up to 2050 and, with its coordination efforts on the matter, which go beyond national committees and bodies. In addition, the country is applying innovative solutions in the area of climate finance, namely the first developing country Green Bond.

Ambitious Decarbonisation of Key Sectors

Sectoral targets in NDCs are generally popular, but they often exclude setting out specific plans and benchmarks that need to be accomplished. Thus, these targets do not offer a great deal of certainty in terms of direction of domestic policy nor impact of global climate. Mongolia, as described in Box 5, is an example of a country that provides more certainty. It has focused extensively, in its NDC, on the energy sector, which comprises the bulk of the national GHG emissions. Its NDC highlights renewable energy targets, energy efficiency improvements, especially in the heating sector, and other measures in transport, industry, waste and construction.

Box 5
Mongolia – A country willing to transform its energy sector

Introduction

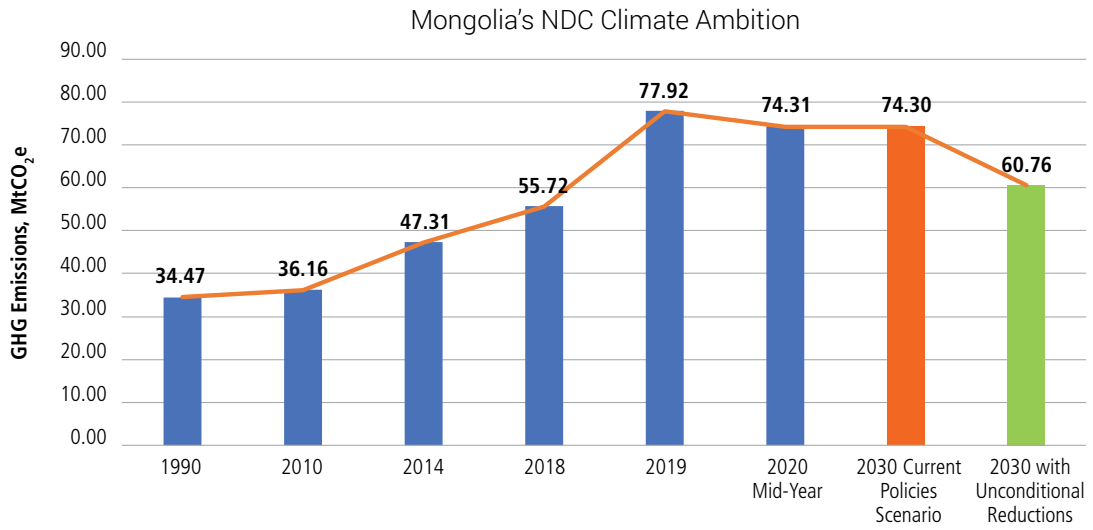
Mongolia is located in the East and North-East Asia subregion. It has a population of 3,198,913 (July 2021) for a territory of 1,564,116 km^2, making it one of the least densely populated countries in the world (2 people per km^2). Around 40 per cent of the population is dependent on livestock production and rainfed agriculture for livelihoods. Mongolia is known for being among the highest per capita GHG emissions in the world, with the energy sector contributing to around half of the emissions, because the country has a cold continental climate and therefore the heating season, currently dependent on fossil-fuels, lasts almost 7 months (CIA World Factbook, 2021a; Government of Mongolia, 2018 and Climatelinks, 2021a). Forest reserves cover 8 per cent of the country, mostly in permafrost areas.

Overview of Climate Change Impacts

Due to the country's diverse geography, with six ecological zones spanning high mountain alpine systems in the north and east, and the vast Gobi Desert in the south, Mongolia's climate is characterized by extreme fluctuations in both temperature and precipitation, which fosters the occurrence of various extreme weather events, often within a single year. Over the past 20 years, extreme weather events have doubled in frequency. Key natural hazards are droughts, (sand)storms, floods, wildfires and dzuds (Mongolian term for a severe winter in which large numbers of livestock die). Annual average temperatures are increasing by 2.1°C, more than double the global average growth rate, which leads to evaporation and great aridity. Hence, the number of days with dust storms increased from 18 to 57 days between 1960-2007. Increasing temperatures are melting permafrost and contribute to exacerbating desertification through forest fires, diseases and pests. Changes in temperature and rainfall patterns expose the agriculture sector to pasture degradation, reduced productivity, and increased food imports. Rainfed wheat production could decline by up to 15 per cent by 2030 (Government of Mongolia, 2018, and Climatelinks, 2021a).

Historic GHG Emissions Trends and BAU projections

The main source for heating and cooking in Mongolia is fossil fuels. The second most relevant source of GHG emissions is the agricultural sector (which accounted for 48.5 per cent of the national total emissions in 2014). While LULUCF is a net sink in Mongolia, negative impacts of climate change and other factors (for example, illegal logging) could lower this effect in the future. In addition, permafrost melting could release further GHG emissions (Government of Mongolia, 2018 and Government of Mongolia, 2020).



NDC and Current Climate Policy Ambition

Mongolia submitted an updated NDC in October 2020 (Government of Mongolia, 2020). The NDC has a conditional and unconditional mitigation target based on a business-as-usual (BAU) scenario with and without LULUCF. The main practical actions for mitigation and adaptation are listed below. In its updated NDC, the Government mentions an ongoing project (2018-2021) to develop the national adaptation plan (NAP) to further specify adaptation actions (Government of Mongolia, 2020).

Table: Targets set out within Mongolia's updated NDC

	Target	Sector focus / measures
Mitigation	Mitigate nation GHG emissions by 22.7% by 2030 compared to the BAU scenario (excluding LULUCF) conditional target: reduction of 27% compared to BAU	Use of renewable energy sources: • Hydro/Wind/Solar Power Plants • Heat pumps for heating utilities Improved efficiency of energy production: • Reduce electricity and heat transmission and distribution grid losses • Increase use of combined heat and power (CHPP) • Improve the efficiency of power plants • Improve the heat supply in cities and towns (improving the efficiency of heat only boilers) Transportation: • Switch to Euro-5 standard fuel • Switch the coal export transportation from auto to rail transport • Switch the heating of passenger train to electric heating

Mitigation		**Construction:** • Insulate old precast panel buildings in Ulaanbaatar city • Limit the use of raw coal in Ulaanbaatar city and switch to the use of improved fuel **Industry:** • Energy saving measures **Agriculture:** • Use waste heat from cement plants • Use fly ash in cement production • Use coal bed methane **Industrial Processes and Product Use (IPPU):** • Use waste heat from cement plants • Use fly ash in cement production • Use coal bed methane
Adaptation	• Several goals and actions related to the following areas: • Animal husbandry and pastureland • Arable farming • Water resources • Forest resources • Biodiversity • Natural disaster • Public health • Livelihood and social safeguard	

Source: Government of Mongolia (2020).

In support of Mongolia's identified targets and measures, the country relies on a broad set of policies and strategies, including:

- Green development policy of Mongolia, 2014
- National action program on climate change, 2011
- Sustainable development vision-2030, 2016
- State policy on the energy sector of Mongolia, 2015
- State policy on food and agricultural sector, 2010
- State policy on forest, 2015
- Law on renewable energy, 2015
- Law on energy, 2015
- National program on energy saving, 2017

In general, the NDC targets are aligned with the targets and actions within these documents (for example, Mongolia's initial NDC was based on the Green Development Policy of 2014). Any future policies and strategies (for example, the NAP under development) will also build upon the updated contents of the NDC. The updated NDC states that the principal targets presented in the NDC are in line with the national development policy documents such as the Vision-2050 (Government of Mongolia, 2020).

Enabling Factors for Raising Climate Action in the Future

As per the documents listed above, Mongolia has incorporated climate-related targets in cross-sectoral, as well as sector-focus policies and laws, and is now in the process of turning them into concrete actions. The Ministry of Environment and Tourism (MET) is responsible for coordinating climate change issues at the national level. However, there are challenges due to few numbers of staff within the MET. In addition, at the local level there is no entity or officers who are directly responsible for the implementation of climate-change related activities. The country has had several Green Climate Fund (GCF) projects approved (Climate Climate Fund). In addition, Mongolia has been encouraging public as well as private investments to move toward low-carbon emissions. This is especially the case for the energy sector, which is guided by a specific policy on renewable energy. Mongolia is seeking to improve its monitoring, reporting and verification (MRV) abilities and looking for technical assistance/capacity-building in this regard.

Regarding gender mainstreaming, the updated NDC refers to vulnerable social groups in the context of climate change. This is to be achieved through social safeguards and the provision of diversified livelihoods (Government of Mongolia, 2020). The NDC and other relevant policies do not explicitly mention gender equality and climate change links, however the 10th periodic report by Mongolia submitted to the Convention on Ending all Forms of Discrimination Against Women (CEDAW), in 2020, notes a new programme by the National Committee on Gender Equality for an analysis of the legal and policy environment (CEDAW, 2020). This could strengthen links between gender and climate change in policies going forward.

What can other Countries Learn from this Country to Raise Ambition?

Two lessons can be learnt from Mongolia. First, Mongolia is seeking to achieve high decarbonization targets, by pushing activities in relation to several sectors, such as energy efficiency in buildings and a transformation of the heating supply. Through this approach, Mongolia wants to lead by example, showing that a high emitting country (on a per capita level) can strive for deep reduction targets. Second, it has successfully secured international climate finance, especially due to its focus on the domestic private sector. For instance, for one GCF project the country was able to get a local bank accredited (XacBank), which has an Eco-Banking department to address climate-related projects. Other countries could use this as an example.

Creating a Carbon Price

With regards to carbon pricing, a relatively smaller number of countries in the Asia-Pacific region are currently implementing a carbon tax, or emissions trading scheme in some capacity, and the majority are simply buying or generating carbon credits (for example, Clean Development Mechanism (CDM), etc).

Only Singapore and Japan have implemented an explicit carbon tax, however, many international organizations and studies have expressed disappointment at Japan's cost of carbon at US$ 3/tCo_2e, which is significantly lower than the international average for an economy that is the size of Japan. The Chinese National Emissions Trading Scheme (ETS), implemented, in July 2021, following eight years of pilot programs in major cities and which will cover the largest area of any ETS globally thus far, has also faced some criticism for its carbon cost, which started off and remains around US$7.4/$tCO_2e$.

There are also some countries that have moved back. For instance, Australia introduced a carbon tax in 2012, with the intention to transition toward emissions trading later, however the tax was repealed in 2014.

On the other hand, there are nine countries in the region, and across all income levels, that have a plan to implement a national or subnational emissions trading scheme to benefit each country's national needs. These include, Brunei Darussalam, Pakistan, the Marshall Islands, the Solomon Islands, Turkey, Uzbekistan and Viet Nam. As seen in the case study below, Thailand has been a leader in researching and analysing how to best implement an ETS that will benefit both public and private partners. Box 6 presents the case of Thailand that has successfully developed and is currently implementing an emissions trading programme and scheme.

Box 6
Thailand – A developing country at the forefront of carbon pricing instruments

Introduction
Thailand is an upper-middle income country in the South-East Asian subregion, with a population of roughly 69.6 million and a gross domestic product (GDP) of around US$ 424.2 billion (2017, in constant 2010 US dollar terms).

Overview of Climate Change Impacts
Thailand has a diverse landscape, with great plains at the centre, mountainous areas to the north, and highlands in the north-east. The country is also located in the monsoon region with three main seasons, hot, wet, and cool. There has been an increase in temperature of roughly 1°C since 1951. Furthermore, the country has seen significantly heavier rainfall and cyclone seasons. These changes have had a negative impact on agriculture, specifically rice production, which is an integral part of Thailand's economy and food security. This, combined with the fragility of Thailand's coastlines make it susceptible to droughts, flooding, and extreme storms, all of which have become more and more common as a result of climate change (ClimateWatch, n.d.). Thailand ranks 13th globally in the "extreme risk" category for countries most vulnerable to climate change in the next 30 years, and adaptation is especially important in the context of responding to extreme weather and supporting the agricultural sector (Office of Natural Resources and Environment Policy and Planning, 2020). Because of this reality, the Royal Thai Government has made clear the equal importance of adaptation measures to mitigation measures in its NDC, especially by integrating adaptation initiatives into national plans, such as the Strategy for Climate Change in Agriculture (2017-2021), the Climate Change Adaptation Plan on Public Health, and most recently through a project funded by the Green Climate Fund entitled, "Increasing resilience to climate change impacts in marine and coastal areas along the Gulf of Thailand" (UNDP, 2020).

Historic GHG Emissions and BAU Projections
Thailand's rapid economic growth, over the past four decades, has led to rapidly increasing emissions. Emissions result mainly from the power sector (36 per cent) and the transportation sector, though a decline in energy intensity in the future is expected (ERIA, 2021).

NDC and Current Climate Policy Ambition
Thailand's updated 2020 NDC sets out a conditional and unconditional business-as-usual-based target reduction for 2030, excluding LULUCF, as well as adaptation goals, shown in the table below. Thailand has not announced an intended peak emissions year target nor made a pledge to become carbon neutral.

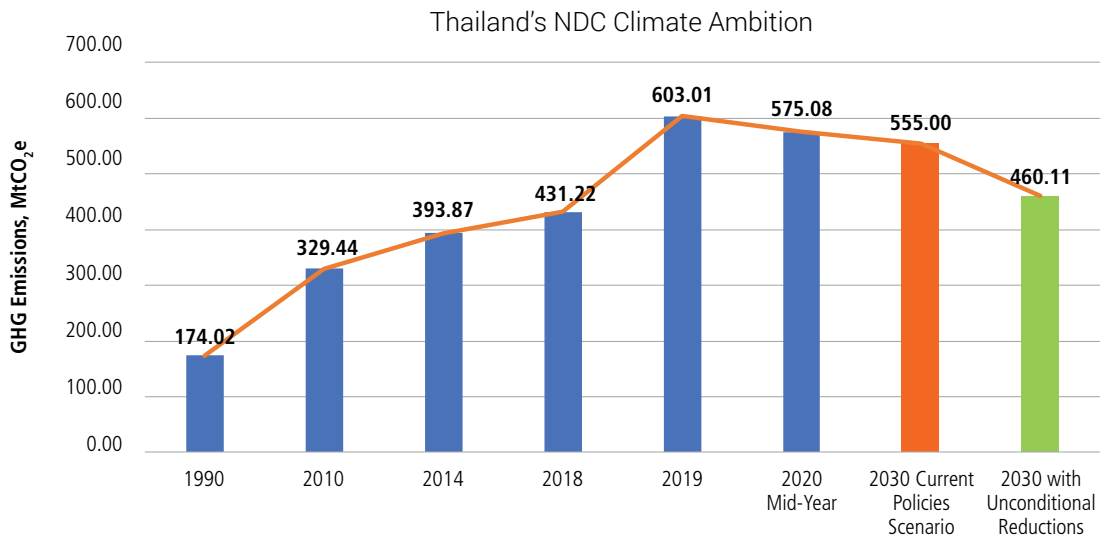


Table: Targets set out within Thailand's updated NDC

	Target	Key Activities
Mitigation	Reduce GHG emissions by 20% (unconditional) and 25% (conditional) from BAU levels by 2030	• Economy wide, excluding LULUCF • Carbon pricing • Energy efficiency • Energy sector reform – including feed-in tariffs, tax incentives • Access to investment grants and funds for renewable energy
Adaptation	Work within the National Adaptation Plan to build adaptive capacity and enhance climate resilience	• Water resources management sector: increasing water security and reduce damage from water-related disasters • Agriculture and food security sector: maintain food security • Tourism sector: strengthen capacity of tourism towards climate resilience • Public health sector: enhance capacity of public health system to reduce health impacts from climate change • Natural resources management sector: sustainably manage natural resources and biodiversity to respond to climate change impacts • Human settlements and security sector: enhance the capacity of individuals, communities, and cities to adapt to climate change

Beyond the NDC, climate change is ranked at the highest policy level in the National Strategy (2021-2037). Thailand has over 30 national and regional energy and climate policies in effect, as well as 25 public bodies responsible for drafting, implementing and enforcing the policies. There is also 1) a NDC Roadmap on Mitigation 2021-2030, which identifies key measures and allocates emission reduction targets and responsibilities to relevant agencies in energy, transport, industry, and waste management sectors; 2) NDC Sectoral Action Plans, which identified emission reduction targets, and 3) the NDC Supportive Action Plan, which highlights gaps and needs to enhance enabling environments to support implementation. Some energy-focused targets are further specified under the Power Development Plan, Alternative Energy Development Plan, and Energy Efficiency Plan (UNDP, Office of Natural Resources and Environment Policy and Planning and GEF, n.d.). Emphasizing the power sector in the NDC is essential because it is Thailand's largest GHG emitter, producing 88 Mt CO_2, in 2017, or 36 per cent of total CO_2 emissions from fuel combustion. Specific mitigation measures also included several support mechanisms, such as feed-in

tariffs, tax incentives, and access to investment grants and funds for renewable energy. Adaptation initiatives are integrated into national plans, such as the Strategy for Climate Change in Agriculture (2017-2021), the Climate Change Adaptation Plan on Public Health, and most recently through a GCF funded project, namely "Increasing resilience to climate change impacts in marine and coastal areas along the Gulf of Thailand".

Enabling Factors for Raising Climate Action in Future

In addition to recent NDC commitments, Thailand is designing a Long-Term Low Greenhouse Gas Emission Development Strategy as the basis for future NDC commitments. Thailand also engages on climate finance, in both a Private Sector Climate Expenditure Review (PCEIR), as well as a Climate Expenditure and Institutional Review (CPEIR), covering both private and public expenditures and their respective climate impacts (Climate Policy Initiative and others, 2021). Thailand is also the first country in the region to pilot a bottom-up budget formulation approach, examining past expenditures in order to conduct a cost-benefit analysis submitted to the cabinet for their annual public budget and beyond (Governance of Climate Change Finance in Asia-Pacific, n.d.).

In terms of gender in climate action policies, Thailand emphasizes the need to enhance the resilience of communities that are vulnerable to climate change impacts and notes that policy implementation in the NDC pledges should be built upon gender sensitivity. At this time, the progress Thailand has made in terms of climate tracking and finance does not integrate sex, age and diversity disaggregated data. There is scope to integrate this data collection, analysis and use as part of these processes to ensure that climate action and the commitments are reaching those most vulnerable and, that there is sufficient data to measure results.

What Can Other Countries Learn from Thailand to Raise Their Ambition?

Thailand is seen as one of the outstanding success stories of developing countries, especially in the context of poverty alleviation and increased welfare gains. Its use of carbon pricing, market-based mechanisms to move ahead is very notable. This has been a goal since 2007 with the creation of the Thailand Greenhouse Gas Management Organization (TGO). Under the TGO, Thailand initiated the Thailand Voluntary Emission Reduction programme, which had 191 registered projects aiming to reduce emissions by 5.28 $MtCO_2e$ annually, as well as the Thailand Carbon Offsetting Program. Finally, in 2015, the TGO launched the Thailand Voluntary Emission Trading System (V-ETS), with 55 pilot plants from 10 industrial sectors. The scheme provided important information for the government on the possibilities and limitations of a national Emissions Trading Scheme in the future, as well as supported an effort to design an MRV system in accordance with international standards. The initiative also highlighted several potential hurdles to establishing a national ETS, for instance, the power sector was not included in the V-ETS because of incompatibilities between regulatory frameworks within the industry and the emissions pricing mechanism.

Cutting Fossil Fuel Subsidies

Last but not least, when it comes to fossil-fuel subsidies, action in the region differs widely. While data is not available for 14 countries in the region, 20 countries in the region provide fossil-fuel subsidies that amount to under 1 per cent of GDP. In contrast, 5 countries provide subsidies amounting to over 3 per cent of GDP, including Kyrgyzstan and Turkmenistan that provide subsidies equivalent to 11 and 8 per cent of GDP, respectively. While subsidies are often defended for their impact on energy prices and therefore ensuring cheaper energy for poorer people in countries, there are other means of direct support to the poor, such as cash transfers or other benefit schemes. Importantly, subsidies go in the opposite direction of carbon pricing as they provide a direct signal to investors and consumers to continue using fossil-fuels. Thus, their existence and extent, in relation to GDP, can be seen as an indication of an unwillingness to act on climate change. However, the transition out of fossil-fuel subsidies is challenging, and emergencies, such as the COVID-19 pandemic, pose important indications of whether countries can make this transition. Box 7 presents the interesting case of Indonesia with respect to its COVID-19 response from which other countries in the region can learn.

Box 7
Indonesia – a country with a green COVID-19 response

Introduction

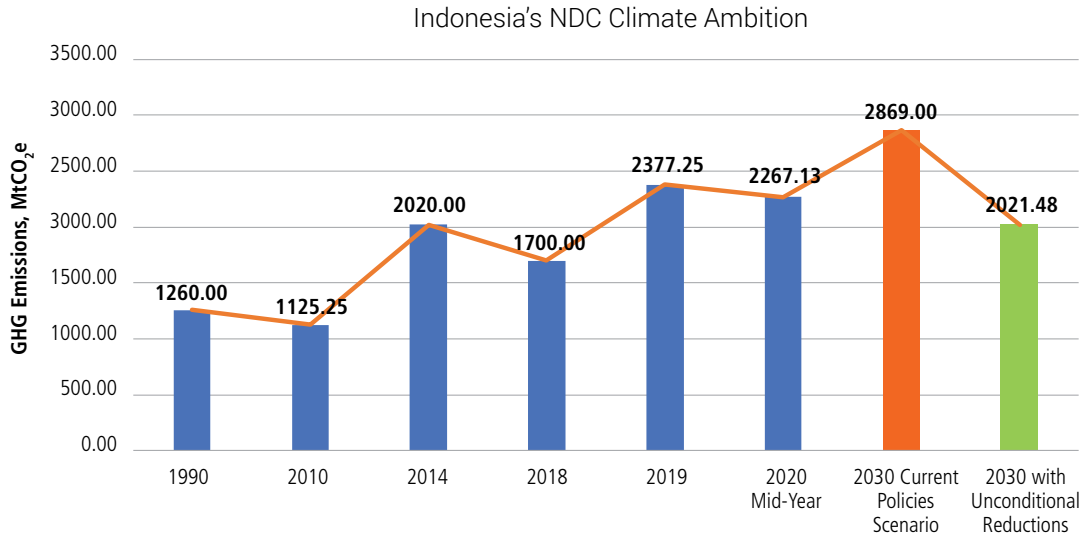
Indonesia is a lower-middle-income country with a per capita gross national income (GNI) of US$ 3,870. At the beginning of 2020, Indonesia was expected to graduate to an upper-middle-income country with a GNI per capita at US$ 4,050. However, as the COVID-19 pandemic struck, that changed.

Overview of Climate Change Impacts

Indonesia is faced with two types of climate impact challenges; immediate changes (for example floods and droughts), and long-term changes (for example, sea-level rise). Indonesia lies in the tropical region and has mainly two seasons in a year, the wet season and the dry season. The wet season sustains from November to April, while the dry season begins from May to October. Since 1990, the mean annual temperature in Indonesia has climbed up by 0.3°C, while annual precipitation has fallen by 2-3 per cent since 1990. It is also worth noting that more rainfall has been observed during the drought season in the northern region, but less during the wet season in the southern region. Floods have also become a concern. From 1900 to 2018, 191 floods were recorded, which accounted for 39 per cent of natural disasters faced by Indonesia. This has accelerated. In 2016, floods accounted for 81 per cent of national natural disasters (World Bank Climate Change Knowledge Portal, n.d.). Finally, based on current calculations, sea levels are rising by 3mm per year. This will lead to further stress on the physical coastline and ecosystems and some damage will be irreversible. Overall, it is estimated that current rice production values could decline by five times. However, the increase of rainfall in some provinces could offset the negative impacts and produce higher value of corn and rain-fed rice (IRENA, 2017).

Historic GHG Emissions and BAU Projections

Over the past 40 years, Indonesia's carbon emissions have grown considerably. Most recently, carbon emissions in Indonesia grew by 30.7 per cent from 2010 to 2019. Indonesia's GHG pledge in its latest NDC is to bring 2030 emissions down to around 2014 emissions levels.



NDC and Current Climate Policy Ambition

Table: Targets set out within Indonesia's updated NDC

	Target	Sector Focus
Mitigation	Reduce GHG emissions by 29% (unconditionally) and 41% (conditional) from BAU levels by 2030	• Energy conservation • New and renewable energy at least 23% in 2025 and at least 31% in 2050 • Oil should be less than 25% in 2025 and less than 20% in 2050 • Coal should be minimum 30% in 2025 and minimum 25% in 2050 • Gas should be minimum 22% in 2025 and minimum 24% in 2050 • Improved waste management • Effective land use and spatial planning, sustainable forest management, including social forestry programme • Restoring functions of degraded ecosystems, including wetland ecosystems • Improved agriculture productivity
Adaptation	The key programmes and strategy to achieve adaptation goals are elaborated in the National Action Plan on Climate Change Adaptation and in the updated NDC (Republic of Indonesia, 2021).	• Reducing drivers of vulnerability to climate change impacts • Responding to climate change impacts and managing risks • Enhancing capacity of communities and sustainability of ecosystem services • Enhancing engagement of stakeholders at all levels in building climate resilience

Enabling Factors for Raising Climate Action in Future

While Indonesia has moved ahead in mainstreaming climate change in legal and other bureaucratic processes as well as in climate finance, it has faced challenges in terms of coordination and transparency. Indonesia also scores 12th in the region for mainstreaming gender in its climate change framework.

What Can Other Countries Learn from Indonesia to Raise Their Ambition

Two lessons can be learnt from Indonesia.

The country's enabling framework was severely tested during COVID-19. In particular, the Government of Indonesia faced a difficult challenge between balancing fiscal pressure and stimulating recovery (United Nations, 2020). The Bank of Indonesia's monetary policy enabled a growing fiscal deficit and spending on citizens and businesses to support them to manage the economic impacts. In 2020, the Government of Indonesia launched around 30 policy measures and spent US$ 52.81 billion on recovery, equivalent to 7.62 per cent of GDP. The Government has also issued eight specific social assistance policies and two social insurance policies, 85 per cent of which targeted specifically women. However, given past fossil-fuel subsidies, there was pressure to raise them. Private credit growth had declined despite "healthy bank balance sheets and moderate corporate vulnerability". Instead, the Government introduced some new recovery measures that had not been envisioned in the NDC but were nevertheless less harmful than direct fossil-fuel subsidies, for example subsidising biofuels for transport. Without these measures, around 2.8 million people were likely to have fallen into poverty due to the pandemic. Statistics indicate that Indonesia's unemployment rate has risen by 1.8 million people from 2020 to 2021.

Second, in terms of participatory processes, Indonesia's Musrenbang is most crucial. It is a special mechanism that connects various communities and includes them in national development discussions. The term – "Musrenbang" is composed of musyawarah ("community discussion" and perencanaan pembangunan ("development planning") – refers to an annual session for residents to gather and discuss the community development agenda in depth. Here, each participant is encouraged to share their ideas openly and the mechanism is open for everyone and seeks to help increase local awareness of climate change.

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CHAPTER 5

ASSESSING COUNTRY-LEVEL ENABLING FACTORS

5. ASSESSING COUNTRY-LEVEL ENABLING FACTORS

Moving forward with NDC implementation over the next decade, it is crucial to understand the various factors that enable effectiveness and high impact of the respective climate actions, indicating readiness to both implement and raise the ambition of existing NDCs, and of those that will be submitted in 2025.

With regards to enabling factors, the four indicators used, as shown in Figure 16 in Chapter 3, have gender mainstreaming integrated into each enabler:

- **Mainstreaming climate change into laws and policy;**
- **Horizontal and vertical coordination mechanisms, including for engagement of local government and private sector;**
- **Allocation of financial resources, including sectoral budgets to support specific NDC targets;**
- **Monitoring and verification capacity (transparency)**

The rationale for exploring each of these four enabling factors and the gender integration analysis for each is as follows:

First, mainstreaming NDC actions into national development plans, policies, strategies, and roadmaps is critical to prioritizing GHG emissions reductions. If key policymakers and decision-makers are not aware of the country's own climate change commitments, NDCs cannot successfully be processed and effectively implemented. In contrast, this mainstreaming process can help to stimulate the NDC commitments within a country, for instance, by initiating green growth strategies for climate change action such that the action is part of a long-term and holistic economic plan to move the national economy into green development. It can also be accelerated by a well-visioned low-carbon development plan, incorporating climate action (e.g., climate mitigation and adaptation) into national development schemes. Similarly, mainstreaming NDC or carbon targets into laws could also bind all actors into climate action, and thus fasten the NDC implementation. However, some of these are not directly measurable. Finally, if policy and decision-makers are serious about delivering on commitments to gender equality in climate action, then gender equality should feature prominently in climate policies, including NDCs and also in National Communications, and in national climate change laws and strategies.

Second, having channels of both horizontal and vertical communication with various stakeholders is important. For further advancing the climate action agenda, such communications, especially for relevant ministries within the government, with high-political support from the Head of State or at the Prime Minister level, and collaboration from top to grass-root level governments and municipal level units is critical. Establishing a coordination mechanism for consultation and engagement of sectoral ministries and subnational authorities, or even creating a special ministry for climate change, is key to delivering NDCs as well as ramping up ambition according to local situations and conditions. It is the steppingstone to ensuring a wider ownership and accountability for actions within the government and public administration, and not just the responsibility of the ministry or department in charge of climate change matters. Ensuring that the key women's ministry, or gender expertise, is a part of the climate change coordination committee, or institutional structure, demonstrates a commitment to, and supports implementation of, gender equality outcomes in climate action. The other crucial element here (analysed as part of this assessment report) is the level of climate change mainstreaming in national gender equality and women's empowerment frameworks and policies; thus highlighting the importance of these mutually reinforcing outcomes of gender equality and climate action.

Third, the implementation of most, if not all, climate change actions and commitments, and therefore further higher ambition is not possible without national financial mechanisms to incentivise sectoral and local climate action. Furthermore, and as noted in Chapter 4, while many Asia-Pacific countries have indicated, in their NDCs, that they will have "unconditional goals" which will be fully supported by national financial resources, others have "conditional goals" meaning that they will require extra grants or loans from other countries to deliver. Moreover, as Asia-Pacific countries have invested more and more financial and administrative efforts into NDC implementation, there is no doubt that financial support and collaboration from the private sector is essential for greater achievement in climate change action. To further shift financial support and investment into climate friendly activities, monitoring climate spending can also create a positive and sustainable momentum for climate action in the region. This is also the case for gender in climate finance, where we see a push for dedicated climate funding streams for gender equality outcomes and a recognition of the required finance needed to deliver equal and inclusive climate action. Thus, this assessment assumes that the better the national appropriation of funds, with a wider engagement with the private sector, and a clearer climate budgeting mechanism, the better the chances for implementing NDCs and raising ambition in the updated NDCs.

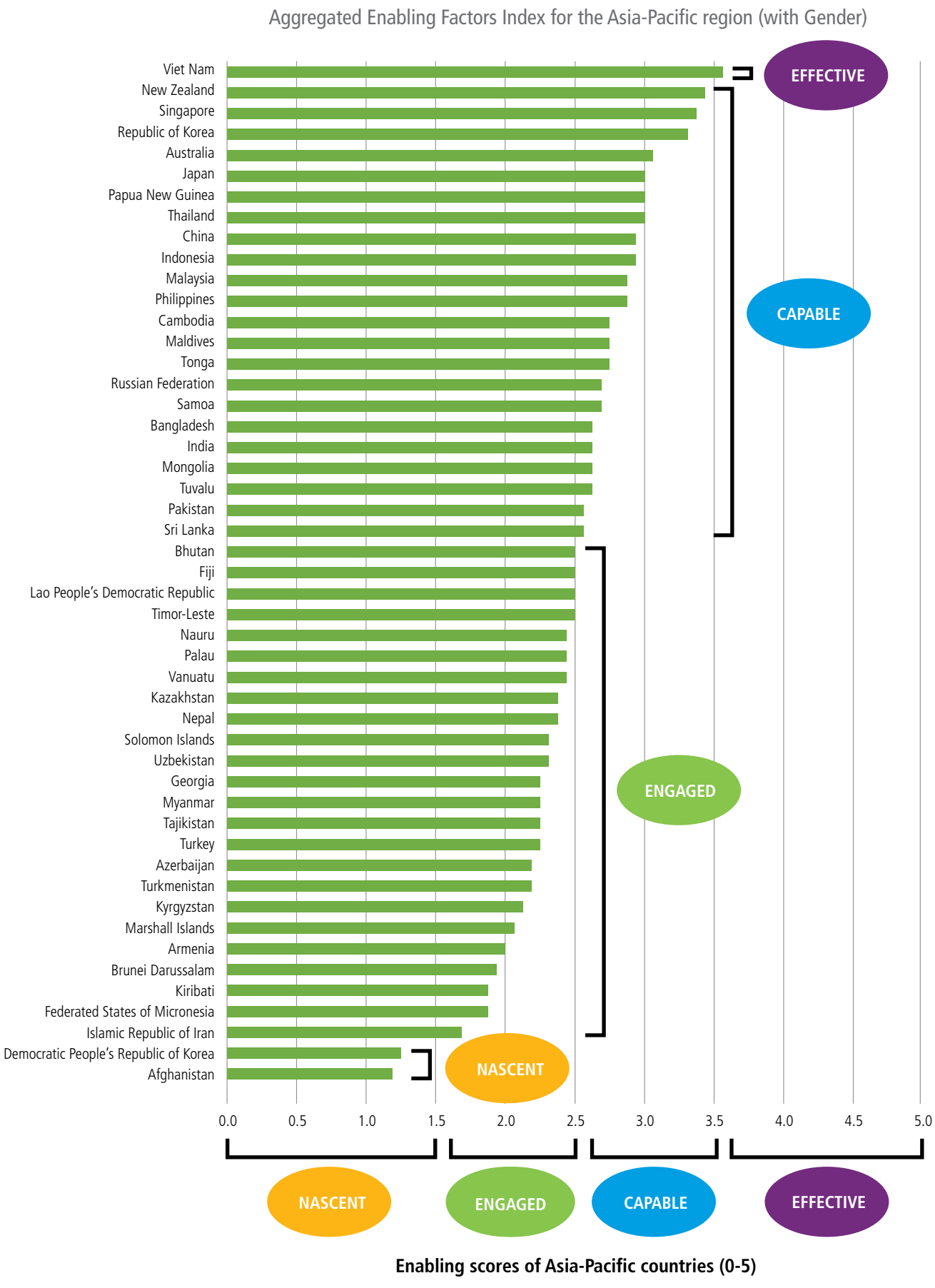
Fourth, transparency, also known as Monitoring, Reporting, and Verification (MRV), is central to NDC implementation. It is not possible to act on climate change if results (e.g. emissions reductions) are not measured or well understood. In addition, policy instruments cannot be assessed for their effectiveness/value for money if their impact is not being monitored. Gender-responsive monitoring and evaluation makes up an important part of gender mainstreaming in climate action. Without the commitment to collect, analyse and use sex, age and diversity disaggregated data, and the development of gender indicators, it is not possible to measure the efforts of enhanced gender-responsive climate action.

The Paris Agreement provides the framework for reporting on GHG inventories, as well as monitoring NDC implementation, under the Enhanced Transparency Framework (ETF). This has been further elaborated under the Paris Rulebook. Countries are expected to provide their first Biennial Technical Reports (BTRs) by 2024, which will include progress on NDC implementation and GHG inventories in an accurate and transparent manner. As far as gender is concerned, there are specific CEDAW and Beijing Platform for Action reports, where countries can communicate their actions for prioritising the rights and needs of women and girls in climate change. However, as very few countries in the region have developed clear measuring, reporting and verification mechanisms, the assessment of readiness under this category used "proxy" indicators to assess the national capacities and systems used to monitor and report effectively. This report assumes that the better the capacity to collect and analyse data for GHG inventory preparation and climate action reporting, and the better the institutional arrangements for doing so, the better the chances that the country will implement NDCs and raise ambition in the future.

This analysis of enabling factors suggests varied progress, which could impact ambition. Figure 21 summarises the aggregated results by country. Among such countries, for example, are Vietnam is rated as "effective", while Thailand, Indonesia and Malaysia have been rated as "capable" and are seeming ready to be more ambitious, despite of their relative modest greenhouse gas emissions reductions in the updated NDCs.

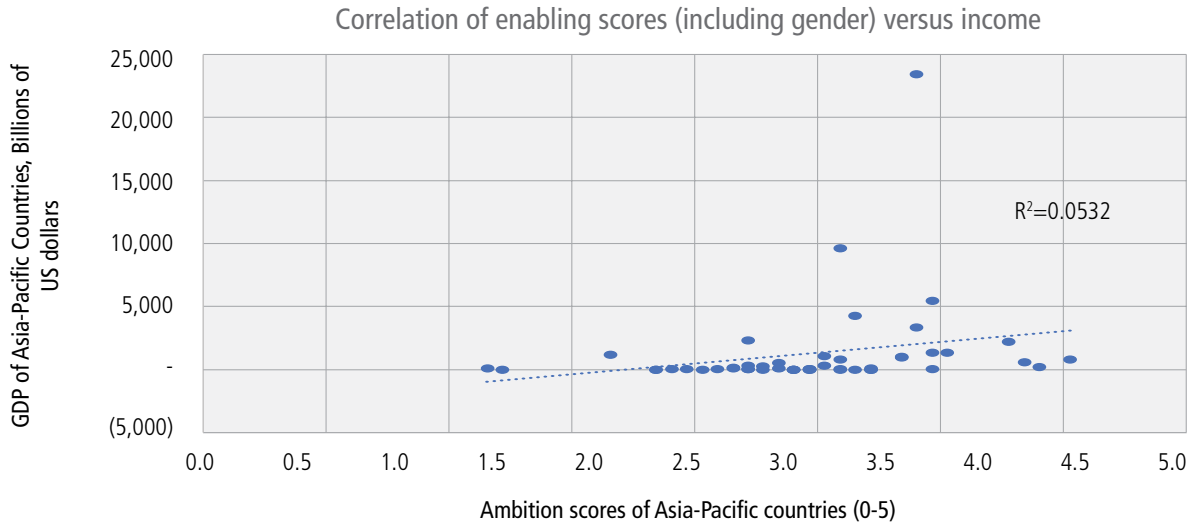
Again, what is interesting about our region is that making progress on these enabling factors is not determined by income. The countries mentioned earlier are with mixed incomes, other countries with good levels of income countries such as Brunei Darussalam and Fiji are advancing more slowly. There is also the group of North and Central Asian countries, with Kazakhstan and Georgia coming very high in the group of "engaged" countries, while the rest, including Turkmenistan, Kyrgyzstan and Armenia progressing only slowly, mostly because of a lower climate finance readiness and transparency scores. A good **monitoring, reporting and verification** (MRV) system, the pillar of the **enhanced transparency framework** of the Paris Agreement and at the enterprise levels, is a prerequisite for gaining trust of climate funds and multilateral financial institutions.

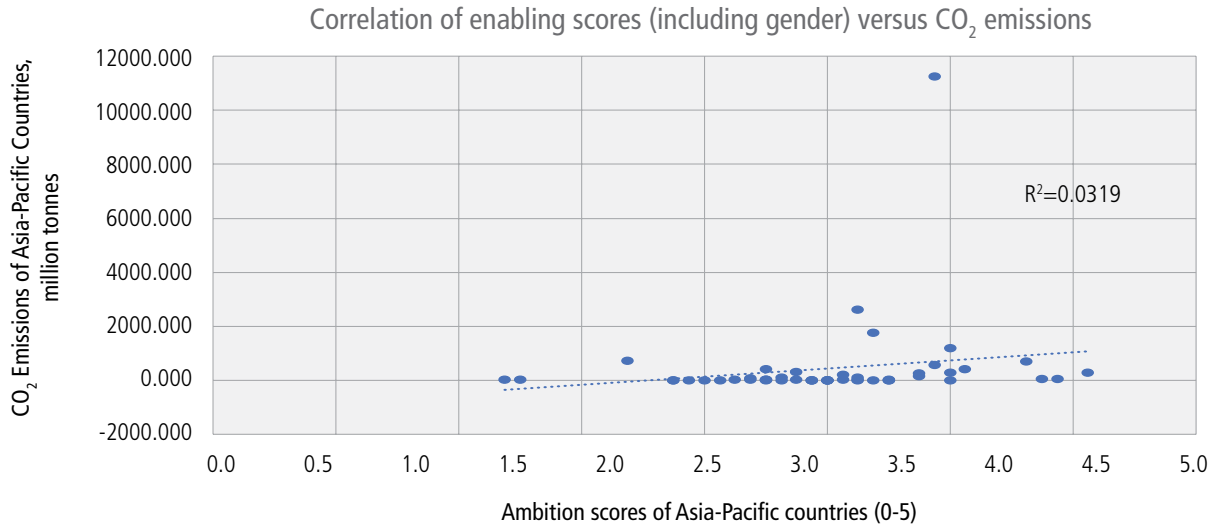
Figure 21: Aggregated Enabling Factors Index for the Asia-Pacific region (with Gender)

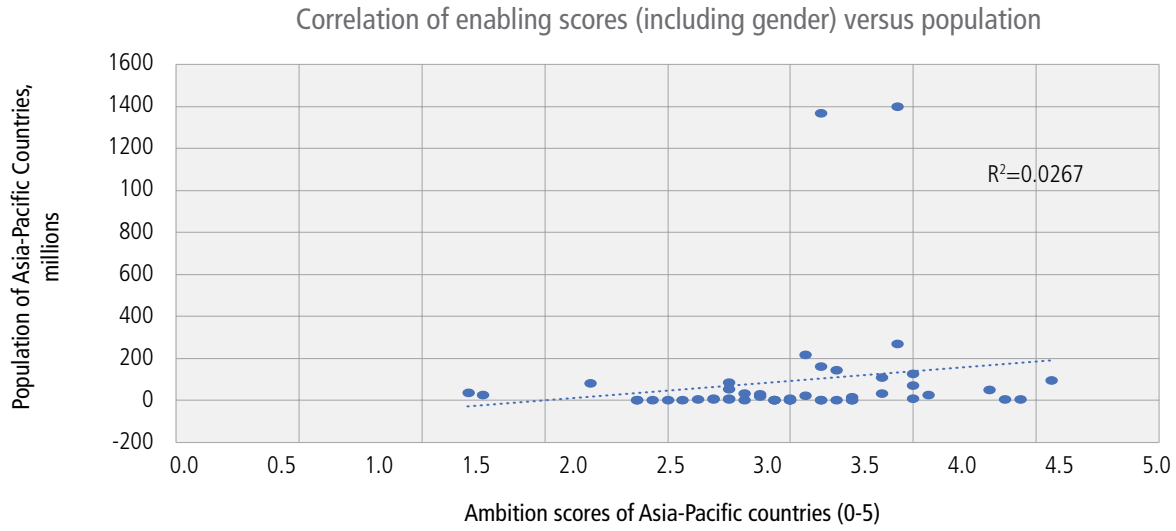


As with the ambition index, this "enabling factors" index can also be analysed against income (GDP), CO_2 emissions and population to assess whether these results are driven by such factors. These correlations are shown in turn below in Figure 22.

Figure 22: Correlation of Enabling Factors with other variables (including gender)







As was the case for ambition, this index shows limited correlation with income, population or current emissions. For instance, income only explains 5 per cent of the variation in the enabling scores, that is, the evidence does not suggest that a richer country will create more enabling conditions or a poorer one will have less enabling conditions. Admittedly, two high income countries are at the top of the index and lower income, fragile states are at the bottom of the index, but between those extremes there are several countries that have high income and low investment in enabling factors, and others with low income and strong enabling factors.

So, what do we know about the specific enabling factors in the Asia-Pacific region, including the degree of mainstreaming gender?

Mainstreaming Climate Change in National Policy Frameworks

When it comes to mainstreaming climate change in government policy, the analysis suggests significant progress in the region. Overall, 27 out of the 49 countries have development plans that include climate mitigation and adaptation actions. For example, Sri Lanka has explicitly launched the National Adaptation Plan for Climate Change Impacts (2016-2025), incorporating climate change actions into national development. And most importantly, the assessment finds that 44 out of 49 countries have used climate change laws, and 35 of these have had the laws in place for over three years. In the Maldives, a climate change bill was developed in 2018 and turned into the Environment and Protection and Preservation Act since 2020. However, in terms of formulating green growth strategies, the overall performance is rather lagging. While only one country presented no data, 24 of 49 have created strategies, but the strategies themselves are rather broad. The analysis in this review suggests that the increasing commitment to gender-responsive climate action is being adopted by many, albeit in varying degrees. Across the four enablers, the highest commitment to link gender equality and climate change is evident under the mainstreaming enabler. Significant strides have been made to ensure that the inextricable links between gender inequalities and climate change is recognised in NDCs, climate laws, policies and strategies and that gender equality, SDG 5 is critical to address implementation of SDG 13 on Climate Action. 8 out of the 49 countries received the highest possible score for gender in climate change mainstreaming, and 34 per cent scored either a 4 or 5 out of a possible 5 points.

In sum, while gender mainstreaming seems to involve more effort to shift into the “effective” category, this means the vast majority have laid strong foundations of national climate/NDC mainstreaming.

One useful example of putting climate change into national growth strategy is Viet Nam, as explained in Box 8.

Box 8:
Viet Nam – a highly enabled country with insufficient ambition

Overview

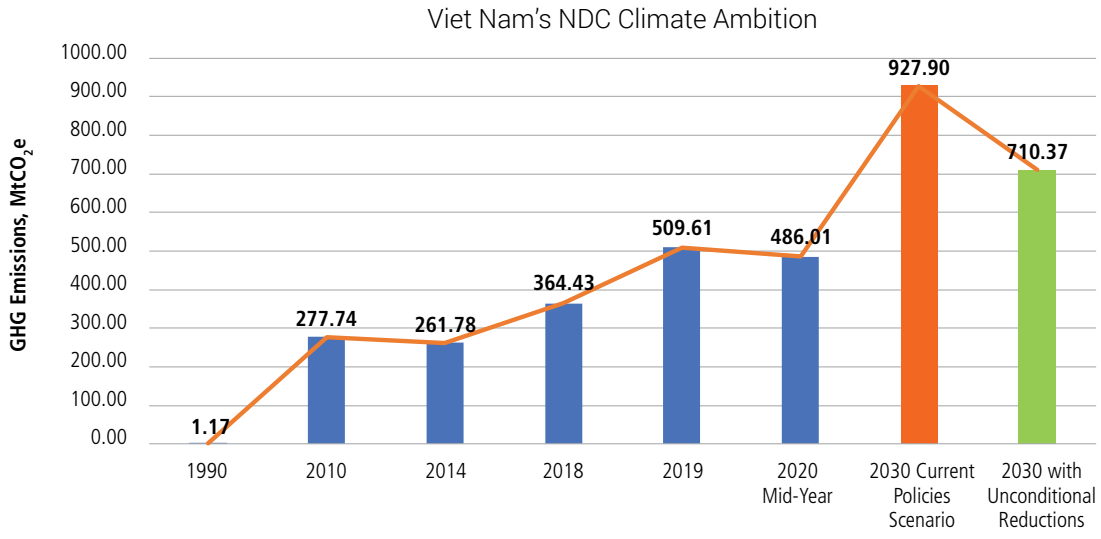
Viet Nam is in the South-East Asia subregion with a diverse climate including temperate and tropical regions. Its long coastline combined with its geographic location and diverse topography contribute to it being ranked as one of the five most prone to the negative effects of climate change (World Bank Climate Change Knowledge Portal, n.d.). In recent years, Viet Nam has shown dedication to addressing climate issues through several national, subnational, and multilateral policies that have been implemented to address both mitigation and adaptation in the fight against climate change (Nhat, n.d.).

Overview of Climate Change Impacts

Recent monitoring data shows that water flows at hydrological stations in the main river basins have been below average for several years, reaching historic lows in several areas and causing water shortages (World Bank Climate Change Knowledge Portal, n.d.). This is a problem for the rice industry, which employs roughly two-thirds of the rural population and makes Viet Nam one of the world's largest rice exporters. Furthermore, much of the country's population and economic assets live in two major deltas, the Mekong River Delta and the Red River Delta, both of which are highly prone to sea level rises. It is estimated that if the sea level rises by 100 cm, over 4 per cent of the railway system, 9 per cent of the national highway system, and roughly 12 per cent of the provincial roadway system would be affected (The Socialist Republic of Viet Nam, 2020). It is also estimated that climate costs could reduce GDP by about 2 per cent if the sea level rises by 18-38 cm by 2050, and could lead to other social effects such as an estimated 3.8 per cent increase of hospitalizations for children under the age of 5 for each 1°C increase (UNU-WIDER, 2013).

Historic GHG Emissions Trends and BAU Projections

Viet Nam has experienced a spike in GHG emissions over the past twenty years, with a growth from 0.31 tonnes per capita in 1990 to 1.93 tonnes per capita in 2017 (World Bank and ADB, 2020). This spike can be attributed to a policy emphasis on growth of key carbon-intensive industries. Viet Nam's BAU scenario relies on using 2014 as the base year (IISD SDG Knowledge Hub, 2020). The largest proportion of GHG emissions are estimated to result from the energy sector, which is expected to reach an equivalent of 500.7 MtCO2 and 678.4 MCO2, in 2025 and 2030, respectively (The Socialist Republic of Viet Nam, 2020).



NDC and Current Climate Policy Ambition

Viet Nam has been an early actor on climate change, creating a National Target Program in 2008, prior to the Paris Agreement. However, the Climate Action Tracker ranks Viet Nam's current NDC as critically insufficient to help maintain global warming at 1.5°C as stated in the Paris Agreement (Climate Action Tracker). Viet Nam has not made a carbon neutrality pledge, and the country uses a BAU baseline to determine climate action targets as opposed to an absolute unconditional target number. Viet Nam still has the second largest coal pipeline in South-East Asia. However, the Government has recently announced that it will not build any new coal-fired power plants (Largue,

2020). Viet Nam's NDC policies on mitigation and adaptation are summarised in the table below. Most recently, Viet Nam introduced the 2020 Law on Environmental Protection, which will be effective from 2022 and will include policies aimed at standardizing a criteria-based classification of investment projects (Vietnam Law and Legal Forum, 2021). Finally, the nation has a dedicated climate fund, named the Vietnam Environmental Protection Fund, which operates as a state financial institution under the Ministry of Natural Resources and Environment (MONRE), and has been in place since 2002 (Priambodo, 2013). This distinguishes the nation as an early leader in climate finance.

	Target	Sector Focus
Mitigation	9% (unconditional) and 27% (conditional) reduction in GHG emissions compared to the BAU scenario by 2030	• Renewable energy target of 15-20% share by 2030 and 25-30% by 2045 in the total primary energy supply • 5.5% (unconditional) and 16.7% (conditional) reduction in the energy sector • 0.7% (unconditional) and 3.5% (conditional) reduction in the agricultural sector • 1.0% (unconditional) and 2.3% (conditional) reduction in the LULUCF sector • 1.0% (unconditional) and 3.6% reduction in the waste sector • 0.8% (unconditional) and 0.9% (conditional) reduction in the IP sector.
Adaptation	Increasing adaptation actions and policies	• Strengthening research and monitoring capacity for climate change • Consolidating rural and irrigation infrastructure • Developing national water resources master plan and river basin integrated master plan • Climate-smart and environmentally friendly agriculture • Sustainable forestry target program • Enhancing knowledge dissemination, improving adaptive capacity.

Enabling Factors for Raising Climate Action in Future

Viet Nam now has a National Strategy on Climate Change and the National Target Program to Respond to Climate Change and on Green Growth (NTPRCC-GG, 2016-2020). Most recently, Viet Nam introduced the 2020 Law on Environmental Protection, which will be effective from 2022, and will include policies aimed at standardizing a criteria-based classification of investment projects.

The Ministry of Planning and Investment has a Climate Finance Task Force aimed at guiding financing mechanisms for climate change mitigation programs.

Viet Nam has also accessed GCF funds for three active projects totalling $146 million. The projects cover adaptation and mitigation, targeting the agricultural sector and resilience of vulnerable coastal communities as well as improving energy efficiency for industrial enterprises. All three projects include Gender Action Plans and consequently, dedicated finance for gender and climate change. The broad range of these funded activities indicates the potential for Viet Nam to do even more.

In terms of private investment, Viet Nam has also demonstrated a willingness to engage in PPPs for low-carbon development. USAID's Vietnam Competitiveness Initiative has been working with the MPI in recent years to develop a framework for PPP programs in Viet Nam with a special emphasis on encouraging environmentally friendly infrastructure projects (USAID, 2021). The Government of Viet Nam is highly concerned about the current high levels of upfront investments needed for energy efficient and renewable technologies.

Though Viet Nam does not currently engage in comprehensive climate budget tagging, the Government does conduct an overview of the climate funding landscape as well as both a Climate Expenditure and Institutional Review (CPEIR) and a Private Sector Climate Expenditure Review (PCEIR) (Climate Policy Initiative and others, 2021). These two initiatives together provide the Government with an overview of public spending on mitigation and adaptation initiatives, as well as review the private sector's engagement with climate change finance, identifying future investment needs and policy gaps.

Finally, similar to some of the adjacent countries within the region, Viet Nam's efforts to mainstream gender equality and social inclusion in national climate policies are commendable. The National Climate Change Strategy, domestic enactments and decrees such as Law on Natural Disaster Prevention and Control and Law on Environmental Protection, as well as programs such as the approval of the National Target Program to Respond to Climate Change all incorporate the principles of gender equality. The National Communication links the impact of climate change to the ability of the country to achieve targets under Sustainable Development Goal 5 (Gender Equality and Women's Empowerment). Viet Nam's updated NDC also includes explicit mention of the range of diverse vulnerable groups affected by climate change, including the poor and ethnic minorities, the elderly, women, children who are vulnerable to early marriage, people with chronic diseases as well as people with a disability and those whose livelihoods are affected by adverse climate conditions. Despite this, currently, sex, age and diversity disaggregated data is not collected.

What Can Other Countries Learn from This Country to Raise Ambition?

Other nations can take lessons from Viet Nam in not only mainstreaming climate change in national policy better, and exploring new modes of financing to unlock new mitigation and adaptation action, but also ensuring these actions actually address the most complex issues and not just the low-hanging fruit. Overcoming the initial high levels of investment, especially in the context of renewable energy or other energy-efficient innovations, is very challenging, but is necessary to drive up ambition. Viet Nam can use the enabling factors it has put into place to drive a more effective climate change mitigation strategy overall.

Horizontal and Vertical Coordination Mechanisms for Climate Change

Regarding the national coordination efforts for climate change, all 49 countries present the potential to expand more subnational and local coordination practices. In terms of subnational actions, 27 of the 49 countries showcase clear responsibilities and financial budget among sectoral ministries. However, while most of the countries indicate national concern on climate change, there is little coordination at the Head of State level within the countries, though there are some exceptions. For example, Singapore has established the National Climate Change Secretariat as part of the Strategy Group to the Prime Minister and his cabinet, addressing the climate change issues within and beyond Singapore (NCSS). Overall, very few countries in the region, 6 – 8 per cent are coordinating sufficiently to perform effectively on this metric, with all these countries being relatively high income countries, such as – Australia, Japan, the Republic of Korea and New Zealand. With regards to local actions, around 58 per cent of the countries (28 out of 49) show no local-level coordination mechanisms. 14 countries have assigned responsibilities to local governments, and 3 countries have regular coordination across municipalities, fighting against the climate change crisis from the top to the grass-root level of the country. For example, in Bangladesh, the capital Dhaka acts as a role model for the rest of the country in dealing with the climate change crisis (Lowenkron, 2021).

Furthermore, the results of the gender analysis suggest that overall, few countries have integrated women's ministries or gender focal points in the existing national climate change coordination structures, and fewer again are actively promoting a gender balance in climate change coordination

and decision-making. Positively, gender inclusive processes were reported widely, in line with the recommendation stemming out of the Paris Agreement and Katowice Climate package (WGC, 2021).

Another important note is that not only are some countries actively prioritising and integrating gender issues in climate change action, but efforts to integrate climate change in national gender equality frameworks have also been made. A number of countries in the region are actively addressing climate change issues in their gender equality policies and commitments, including creating targets and action plans to promote equal and inclusive climate change and establishing gender and climate change committees under their relevant women's ministries. Cambodia is a leading example of this, and Box 9 below provides the case study.

Box 9
Cambodia – a model for gender and climate integration

Introduction
Cambodia, in the South-East Asian subregion, has been classified as a lower middle-income country since 2015, and is attempting to reach higher middle-income levels by 2030, being (prior to COVID-19) one of the fastest growing economies in the world. The Cambodian economy, driven by the garment industry and tourism, has sustained a growth rate of 7.7 per cent annually between 1995 to 2019.

Overview of Climate Change Impacts
Cambodia is vulnerable to climate change due to its tropical climate and the effect of climate change on the monsoon season (May-October) and the dry season (November-April). This weather pattern can lead to irregular flooding and rainfall, which in turn can cause widespread food insecurity. 80 per cent of Cambodia's rural population relies primarily on subsidence crop production. Furthermore, some studies show that more frequent flooding around the Mekong river basin and other areas could potentially lead to increased agricultural losses, estimated at $100-170 million per year (World Bank Climate Change Knowledge Portal, n.d.). In addition to direct threats to agriculture, climate change could decrease access to clean water, which is already a major health concern in Cambodia, due to stressors on the Tonle Sap, the largest freshwater lake in South-East Asia. This could affect the inland fishing industry in Cambodia, which comprises roughly 12 per cent of the national GDP and represents 80 per cent of Cambodia's annual protein intake.

Historic GHG Emissions Trends and BAU projections in the Country
Currently, Agriculture, Forestry and Other Land Use (AFOLU) is expected to account for the largest percentage of Cambodia's GHG emissions in 2030, roughly 49.2 per cent overall. This is followed by energy, with 22.2 per cent, and agriculture, at 17.5 per cent (Kingdom of Cambodia, 2020).

NDC and Current Climate Policy Ambition
Cambodia released its updated NDC in 2020. The document sets out an ambitious target to half AFOLU emissions by 2030, and outlines detailed adaptation measures, listed in the table below. Beyond the AFOLU target, Cambodia has also committed to carbon neutrality for 2050, but has no clear stated plan to peak emissions, and limited discussions on the use of climate finance and decarbonization through renewable energy. Cambodia is unique, however, in its dedication to including gender in both mitigation and adaptation.

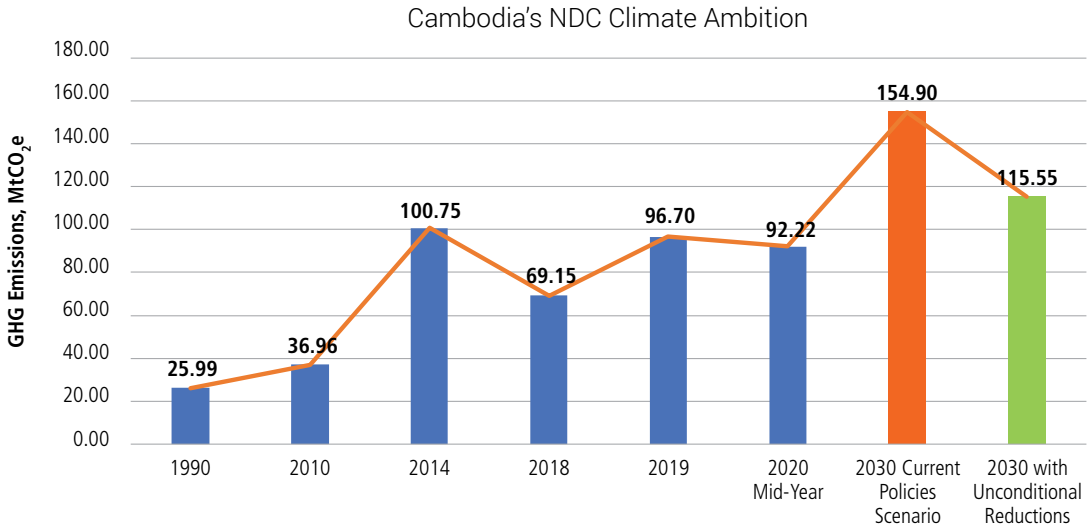


Table: Targets and Key Sectors Outlined in the Country's NDC

	Target	Key Sectors
Mitigation	41.7% overall reduction compared to BAU levels by 2030	• AFOLU: 59.1% emission reduction by 2030 • Energy: 21.3% emission reduction by 2030, mainly through renewable energy generation • Agriculture: 9.6% emission reduction by 2030 • Industry (IPPU): 9.1% Emission reduction by 2030 • Waste: 0.9% Emission reduction by 2030
Adaptation	Focus on the impacts of climate change on an agrarian-based economy, insufficient, physical infrastructure, and limited access to technologies	• Agriculture and Water Resources: improved farming technologies to increase crop yield, increasing emergency preparedness • Infrastructure: Climate-change focused building planning, assess impacts of infrastructure on land, housing, coastal management, strengthening climate resilient cities • Coastal Zones: Protection and risk mitigation from marine pollution, management of ecological systems of marine and coastal zones. • Human Health: Enhance climate resilience in health service delivery, Conduct water sanitation and hygiene (WASH) assessments on climate change

The consistent commitment that gender will be a consideration in all future climate action is why Cambodia was chosen to highlight the necessity for all nations to include such measures in their respective climate commitments. Relating to mitigation measures, the NDC highlights the linkages between gender equality, social inclusion, and the connections to climate's effects on energy, waste, transportation, and other key areas. With regards to adaptation in the agricultural sector, the government recognizes the potential to increase women's income generation and decrease work burden through access to technology and the fostering of collective working groups. Finally, there are detailed mentions of the need for gender-disaggregated data for health outcomes, which is currently severely lacking in the country.

In addition to the Nationally Determined Contribution, Cambodia has submitted several documents to the UNFCCC and identified several plans to leverage different sectors and mechanisms to achieve the stated emissions reduction and adaptation targets.

The key plans and initiatives are outlined below:

- The National Strategic Plan on Green Growth (NSPGG) 2013-2030 (2013)
- The Rectangular Strategy IV (2018)
- The National Strategic Development Plan (NSDP) 2019-2023 was developed
- There are four climate change indicators in the current NSDP. The line ministries will be required to develop their own sectoral development plans
- The Circular Economy Strategy and Action Plan
- National Protected Area Strategic Management Plan 2017-2031 (2017)
- National Cooling Plan (draft)
- National REDD+ Strategy 2017 – 2021 (2017) and the National REDD+ Action and Investment Plan (2019)
- National Energy Efficiency Policy (draft)
- National Environmental Strategy and Action Plan 2016–2023 (2018)
- Strategic Planning Framework for Fisheries 2010 – 2019 (2010)
- National Climate Change Strategy Plan (CCCSP) 2014-2023
- Gender and Climate Change Strategic Plan 2013-2023

Enabling Factors for Raising Climate Action in the Future

In terms of mainstreaming, Cambodia has demonstrated commitments in implementing climate change laws and robust green growth strategies and is also strong on climate finance mechanisms. However, Cambodia does have weaknesses when it comes to coordination and transparency (MRV).

Most notably, in the gender metric under Enabling Factor 2: Coordination, Cambodia scored a high four out of five. This indicates that Cambodia falls into the category that includes "Gender inclusive processes, coordination mechanism specifically mentions the role of women's machineries, climate change integrated into gender equality frameworks." The NDC, as well as other relevant climate commitments recently made, have clearly shown that Cambodia is committed to addressing the interconnectedness of these two issues and understands the necessity of joint coordination methods. In addition to the consideration of adaptation and mitigation efforts that would be conducive to gender equality when evaluating ministerial projects, the Cambodian Government has also put in place several avenues of communication and has ensured that coordination on gender and climate action is at the forefront of their policy ambitions. For example, the ministry heading the planning and facilitating of the implementation of gender equality is the Ministry of Women's Affairs (MoWA), and MoWA is a member of the inter-ministerial committee on climate change led by the National Council for Sustainable Development. MoWA, then, has a Gender and Climate Change Committee, which actively conducts studies on the impacts of climate change on women and children, to expand the ministry's work in climate change mitigation overall. Furthermore, MoWA has integrated climate change and its effects into the National Policy on Gender Equality and Women's Empowerment. Finally, the Cambodian National Council for Women specifically highlights the disproportionate impacts of climate change on rural women in its periodic reporting to the Convention on Ending all Forms of Discrimination Against Women (CEDAW). It also highlights existing efforts in Cambodia to mitigate these effects.

What Can Other Countries Learn from This Country to Raise Ambition?

Cambodia is the second highest scoring countries in the region on mainstreaming gender in climate change. This is through two specific mechanisms. First, when evaluating ministerial submissions for both mitigation and adaptation projects or programmes, the project's effectiveness is evaluated based on a number of factors including the costs, alignment with government policy, mitigation and adaptation potential, and gender. Each policy can be ranked from 1-3, with 1 representing no impact on equality, gender inclusion possible, and 3 representing a good possibility to build equality and gender inclusion. Second, the Government has ensured that coordination on gender and climate action is at the forefront, and has established a double-faceted framework, which can serve as model for other countries for voicing gender issues in both directions with the inclusion of the MoWA is in the inter-ministerial committee on climate change led by the National Council for Sustainable Development and with the Cambodian National Council for Women engaged in periodic reporting to the Convention on Ending all Forms of Discrimination Against Women (CEDAW).

Allocation of Financial Resources for Climate Action

When it comes to enabling climate finance, there is significant progress on some metrics and less in others. Notably, 27 out of 49 countries have created a domestic climate fund. Among these 27 countries, 8 have announced the size and flows of the fund, and 19 countries have already used the fund. With regard to the private sector, 28 countries have included the private sector in most of the climate change programs, and 20 of these have issued guidelines and regulations to ensure a green focus within the private sector. On the other hand, in the case of climate tracking, 21 countries have either said it is important in NDCs or announced an intention to track the climate budget. Nevertheless, limited actions in these countries have been found.

Overall, then, when scored, while there is still progress to be made in this area, it seems that over 90 per cent of countries in the Asia-Pacific region are taking action on financing. Indeed, this category of enabling factors has the largest proportion of countries operating effectively to be able to scale up ambition; between 29 and 53 per cent, depending on the degree that countries are concurrently prioritising gender in their climate finance instruments. This is also the only category of enabling factors where countries achieved a score of 5, that is, complete scores. These include specifically the Philippines (both including and excluding gender mainstreaming) and the Republic of Korea (excluding gender mainstreaming). However, the gender analysis of climate finance tells a less progressive story; a quarter of all countries reviewed made no mention of gender and climate finance and very few had specific references to gender priorities in national climate funds, or gender-responsive budgeting for climate action, or specific allocations of climate finance being directed towards gender-focused activities.

Clearly, countries in the Asia-Pacific region have laid significant foundations for financial integration of NDC actions, paving the way for significant NDC ambition. However, more needs to be done to ensure that dedicated climate finance addresses gender priorities and outcomes in climate action. Box 10 presents the case of Bangladesh as setting an operational climate finance framework.

Box 10
Bangladesh – shaping the climate finance framework

Introduction

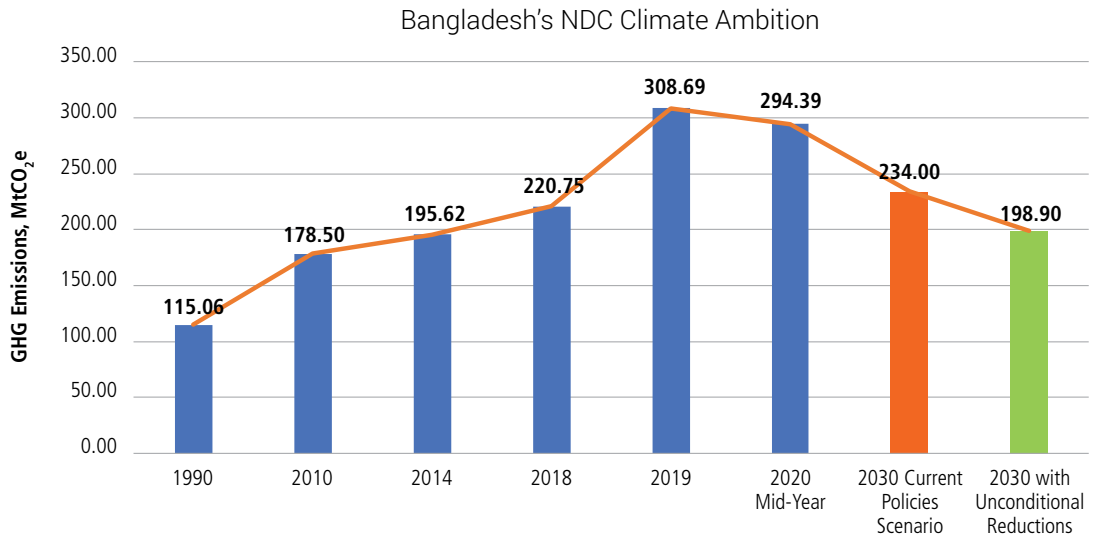
Bangladesh is in the South Asia subregion, with a high population density of 165 million people (in 2021). Bangladesh is the largest deltaic region in the world with two-thirds of the country less than 20 feet above sea level. Bangladesh is developing fast, with rapid industrialization in progress. There is an ambition to shift from labour-intensive industries, like the textiles industry, to energy-intensive industries (People's Republic of Bangladesh, 2018).

Overview of Climate Change Impacts

Due to its topography and geographical location, Bangladesh often experiences extreme weather events, such as cyclones, floods and storm surges. The population density in flood and cyclone hotspots exacerbates vulnerabilities. Rising salinity due to sea water intrusion in coastal areas limits crop yields and production as irrigation, which supplies about half of the agricultural land, is mainly fed by aquifers. Although the agricultural sector contributes only 16 per cent of the country's GDP, almost half (47 per cent) of the people in Bangladesh are employed in agriculture, with rice as the most important product (People's Republic of Bangladesh, 2018).

Historic GHG Emissions Trends and BAU projections in the Country

Bangladesh has a low level of absolute GHG emissions, per capita GHG emissions, and per GDP unit of emissions. Agriculture accounts for 40.5 per cent of the total share of emissions. The second main emitter is the energy sector with 40.1 per cent, especially through electricity and heat production for industry (not coal, mostly gas). The third emitting sector is LULUCF with 10.2 per cent. The waste sector emits 9.6 per cent, especially through municipal solid waste on landfill sites (CH4).



NDC and Current Climate Policy Ambition

Bangladesh submitted an updated NDC in late 2020 (People's Republic of Bangladesh, 2020). The focus of the NDC is adaptation, with actions shown in the table below. Concerning mitigation, Bangladesh has actions in various sectors, some of which are conditional to international support. In the updated NDC, the country states that it is currently in the process of formulating a National Adaptation Plan (NAP).

Table: Targets set out within Bangladesh's updated NDC

	Target	Sector Focus / Measures
Mitigation	Unconditional target: GHG emission reduction of 5% by 2030 in the power, transport and industry sectors, compared to the projected emissions under a BAU scenario Conditional target: GHG emission reduction of 15% by 2030 in the power, transport and industry sectors, compared to the projected emissions under a BAU scenario, subject to appropriate international support	**Power sector:** Improved energy efficiency; gas exploration; ensure all new coal generation uses super-critical technology; increased share of renewable energies to 5% by 2015 and 10% by 2020 **Transport sector:** Modal shift from road to rail; reduced congestion and improved running of traffic **Industry sector:** Reduce energy intensity; Energy audits; energy efficiency measures According to the NDC, a number of further mitigation actions in other sectors, such as households, commercial buildings, agriculture, waste and LULUCF
Adaptation	Increase the adaptive capacity of the country, particularly in the key areas of: Food security, livelihood and health protection (including water security) Comprehensive disaster management Coastal Zone Management including Salinity Intrusion control Flood Control and Erosion protection Building Climate Resilient Infrastructure Increased Rural Electrification Enhanced Urban Resilience	Improved early warning system for tropical cyclone, flood, flash flood and drought Disaster preparedness and construction of flood and cyclone shelters Tropical cyclones and storm surge protection Inland monsoon flood-proofing and protection Climate resilient infrastructure and communication Climate resilient housing Improvement of urban resilience through improvement of drainage system to address urban flooding River training and dredging (including excavation of water bodies, canals and drains) Stress tolerant (salinity, drought and flood) variety improvement and cultivation (including livestock and fisheries)

Adaptation	Ecosystem based adaptation (including forestry co-management) Community based conservation of wetlands and coastal areas Policy and Institutional Capacity Building	Research and knowledge management Adaptation on local-level perspectives Adaptation to climate change impacts on health Biodiversity and ecosystem conservation Capacity-building at individual and institutional level to plan and implement adaptation programmes and projects in the country

Source: Government of the People's Republic of Bangladesh (2020).

In order to comply with its climate pledges, Bangladesh relies on a set of multiple economy-wide, as well as sector-focused policies and actions plans (People's Republic of Bangladesh, 2018), including:

- Seventh Five Year (2016-2020), describing (sustainable) development and inclusiveness of the country until 2020
- Second Perspective Plan – Vision 2041 (2021 – 2041), describing the long-term development perspective
- Bangladesh Climate Change Strategy and Action Plan (BCCSA, since 2009) represents the basic framework for climate-related activities in the country
- The Bangladesh Climate Change Trust Fund (BCCTF), significantly funded by the national budget, finances the implementation of projects under BCCSAP (since 2010)
- Bangladesh Climate Change and Gender Action Plan (2013)
- National Adaptation Plan (under development)
- Roadmap and Action Plan for Implementing Bangladesh NDC (2016-2025)
- Domestic policies, laws and institutions with a specific sectoral focus include:
  - The Bangladesh Climate Change Resilience Fund (BCCRF), mainly donor funded, represents a key institution to increase resilience and provide emergency support and disaster recovery activities
  - Roadmap and Action Plan for Implementing Bangladesh NDC - Transport, Power and Industry Sectors (2016-2025)
  - National Plan for Disaster Management (2016 – 2020)
  - Energy Efficiency and Conservation Master Plan (2015 – 2030)
  - The Climate Change Trust Fund Act (2010)
  - Sustainable and Renewable Energy Development Authority Act (2012)
  - Disaster Management Act (2012)
  - The Bangladesh Energy Regulatory Commission (BERC) Act (2003)

Enabling Factors for Raising Climate Action in the Future

The Government has set-up various policies and governance frameworks for mainstreaming adaptation and risk reduction, and it is considering options for "introducing an impact assessment process whereby any new policies are required to produce standard information on expected impacts, including GHG reductions, before being signed off by Ministers" (People's Republic of Bangladesh, 2018). Bangladesh also has an innovative joint governance structure for the NDC and NAP, also strongly connected with other key national processes (e.g. the current five-year plan). According to the NDC Roadmap, $42 billion will be required to implement the envisaged adaptation measures. Bangladesh has achieved accreditation for several international climate finance institutions. For the GCF

two national entities are operational (People's Republic of Bangladesh, 2020). However, in its NDC, Bangladesh states that it still needs to put in place a workable MRV system to track its efforts and outcomes.

On gender, the development of the Bangladesh Climate Change and Gender Action Plan 2013, as well as the dedicated sections/paragraphs on the gender dimensions of climate change in the BCCSAP, the 7th Five Year Plan and the Third National Communication demonstrate the country's consistent commitment in this area. The commitment to address gender issues in climate action and disaster management is also visible through efforts to build capacity of officials at the Department of Women Affairs and to link disaster management to gender equality frameworks, such as the National Women Development Policy (People's Republic of Bangladesh, 2018). The current draft of National Policy on Disaster Management 2021-2025 also has social inclusion as a basis for achieving resilience. It is an underlying and cross-cutting strategy in all the action plans and aims to ensure that gender considerations are mainstreamed in all the priority actions and in decision-making.

What Can Other Countries Learn from This Country to Raise Ambition?

Bangladesh's financial landscape is characterized by various intermediaries, instruments and planning systems, leading to fragmented disbursement. The country also has limited domestic resources, meaning accessing climate finance is key to delivering on its ambition. The country has not only worked to increase mainstreaming and coordination, it has a very focused financing approach, particularly for adaptation and disaster risk reduction activities with two national trust funds. So far, it seems that projects which prioritize women have been most successful at attracting donor interest. One funded adaptation project is the Country Action Plan for Clean Cook Stoves 2013, which focuses on increasing access to finance for women-led enterprises. Another is the GCF funded project to support coastal communities, that are most vulnerable to climate change, through supporting alternative livelihoods, especially for women.

Monitoring and Verification Capacity (Transparency)

With respect to transparency, or measurement, reporting and verification (MRV), Asia-Pacific countries are generally behind. For instance, 32 countries have not yet participated in the Capacity Building Initiative and only 4 countries, Papua New Guinea, Mongolia, Cambodia, and Bangladesh are putting forward the initiative. With regards to the Biennial Update Reports (BURs) submission, 24 countries have submitted one or more BURs, but 25 countries have not yet submitted any. Among those that have submitted BURs, 13 have submitted more than three and Singapore and Russia have submitted four. In the National Communication (NC) assessment, all 49 ESCAP countries have submitted national communications, but only 5 countries have submitted 4 or more NCs, for example, Armenia and Azerbaijan have submitted 4 NCs each. This implies that a great deal more can be done on transparency (MRV).

In terms of the integration of gender in MRV, the analysis found that one country (the Philippines) is ahead. Cambodia and Vanuatu also scored well on this enabler, and efforts by the Marshall Islands to promote Sex, Age and Disability Disaggregated Data (SADDD) to improve the 'monitoring of the impact and effectiveness of climate change initiatives and policies' are noteworthy (Republic of the Marshall Islands, 2020). However, few countries include the prioritisation of SADDD and include gender target or indicators in their NDCs.

Georgia, featured as a case study under this category in Box 11, is one of just nine countries in the region that scored as "capable" on this enabler, with an operating Monitoring, Reporting and Verification (MRV) framework.

Box 11
Georgia -enabling is not just improving technical ability

Introduction

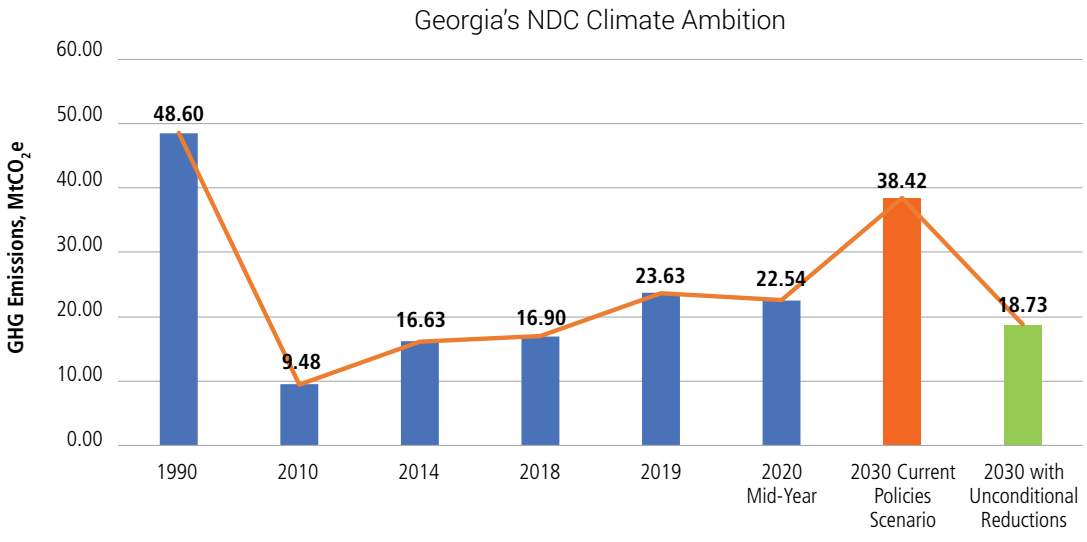
Georgia is located in the North and Central Asia subregion, with a population of 4,933,674 people (in 2021). Most live in the central valley, particularly in the capital city of Tbilisi in the east, while there are smaller urban agglomerations that dot the Black Sea coast, with Bat'umi being the largest. Georgia is a very mountainous country with 54 per cent of its territory located at an altitude above 1000m. With regards to land use, 15.8 per cent represents the cropland, 70.6 per cent is covered by forests, shrubs and grasslands, and 13.6 per cent is used for agricultural activities. In recent years, the scope of industry and intensive agriculture has decreased and Georgia's economy is becoming more devoted to services, including tourism (accounting for 23 per cent of GDP and 20 per cent of employment), banking, and construction sectors.

Overview of Climate Change Impacts

Since the 1960s, the mean temperature across the country's climate zones increased by 0.3 - 0.5°C, while precipitation decreased in the east, especially along the Likhi Ridge, and increased in the west, in areas of Svaneti and Adjara, where precipitation increased by 14 per cent. Georgia has the largest glaciated areas in the Caucasus region, which has already reduced by 30 per cent due to climate change. All these changes cause a higher risk of natural hazards like floods, landslides, mudslides, and droughts, and thus impact local ecosystems, agriculture and tourism sectors and/or require costly recovery measures. For example, landslides triggered by heavy rain around Tbilisi caused an economic loss of approximately $100 million (Government of Georgia, 2021 and Climatelinks, 2021).

Historic GHG Emissions Trends and BAU Projections in the Country

Energy accounts for about 60 per cent of Georgia's GHG emissions, particularly due to the poor output from Georgia's hydroelectric power stations, which forced the country to increase the share of fossil-fuel based power generation. Transport emissions are also high due to an inefficient and old vehicle fleet. Agriculture, the IPPU and waste sector rank next. In contrast, the LULUCF sector is a net GHG sink for the country.



NDC and Current Climate Policy Ambition

Georgia submitted an updated NDC in 2021. It includes sections on both mitigation and adaptation and has a dedicated chapter on gender and climate change. The country has a conditional and unconditional absolute emissions reductions target, including expanding the forestry sector sink. In terms of adaptation, an interesting emphasis is on resilience towards the health sector and engaging on measuring loss and damage.

Table: Targets set out within Georgia's updated NDC

	Target	Sector focus / measures
Mitigation	Mitigate GHG emissions by 35% by 2030 compared to the BAU scenario conditional target: reduction of 50-57% compared to BAU	• Sectoral targets (concrete measures in Climate Change Strategy and Action Plan): • By 2030, Georgia plans to mitigate the GHG emissions from the **transport** sector by 15% from the reference level • By 2030 Georgia plans to mitigate the GHG emissions from **energy generation and transmission** sector by 15% from the reference level • Development of low carbon approaches in the **building sector** • Low carbon development approaches of the **agriculture** sector through encouraging the climate smart agriculture and agritourism • Low carbon development of the **industry** sector through encouraging the climate-friendly innovative technologies and services (reduction target of 5%) • Low carbon development of the **waste** sector (innovative technologies, circular economy) • Increase the carbon capturing capacity through the **forestry** sector by 10% compared to 2015 level
Adaptation	• Several goals and actions related to the following areas: • Intends to assess the impact of climate change on several of its climatic zones (e.g. mountainous and coastal regions and livelihoods of the local population) • Intends to develop adaptive capacity of the most vulnerable winter and coastal resorts • Intends to assess and develop adaptive capacities for the agricultural productions that have the largest share in national GDP (e.g. grape, hazelnut, tangerine) and/or for domestic unique products (such as Georgian honey, non-timber forest products) • Intends to assess the impact of climate change on the availability of groundwater and surface water resources • Intends to encourage the conservation of the species that are endemic • Intends to study the most vulnerable areas of forest lands • Intends to assess the effects of climate change on human health • Intends to facilitate the measures supporting the reduction of losses and damages caused by extreme weather events	

Source: Government of Georgia (2021).

Related to policies and strategies, Georgia is currently working on the development of a Climate Change Strategy 2030 and Action Plan for 2021-2023 (IEA, 2021), which shall include more detailed approaches for sectoral mitigation strategies. For mitigation, Georgia currently relies on its Low Emissions Development Strategy (LEDS), whose draft the country completed in 2017 with support from USAID. As most emissions derive from the energy sector, another key element for NDC implementation is the National Energy Efficiency Action Plan (NEEAP) (2017

– 2020). The plan identifies measures and policies to be adopted in Georgia to comply with the Energy Community / EU standards, including positive climate impacts. Another important strategy is also "Georgia 2020", which, among many other priority issues, focuses on climate change mitigation and adaptation measures, promotion of energy efficiency and development of environmentally friendly technologies. On adaptation, Georgia's Strategy 2015-2020 for Agriculture Development envisages the introduction of climate-friendly agricultural practices in Georgia (Government of Georgia, 2021). In terms of adaptation, Georgia wants to increase its efforts in assessing the vulnerability for multiple of its climatic zones to enable a sustainable management of the areas. In addition, it seeks to advance resilience towards the health sector and to engage on measuring loss and damage (Government of Georgia, 2021a).

Enabling Factors for Raising Climate Action in the Future

Georgia's mainstreaming efforts have focused on integrating agriculture under the Ministry of Environment and the creation of an Environment and Climate Change Department to oversee the whole NDC process. Some local actors are also taking action, although active coordination, more broadly, is fairly limited. For example, Tbilisi has set up the Sustainable Urban Transport Strategy targeting efficiencies in various transport modes, city livability and economic development and designed a Green City Action Plan 2017-2030. And while Georgia is more economically developed than some others in the region, low-cost and long-term capital (especially for wind and solar), is still currently not available in the local financial market. The country is also lacking in ambition around its MRV systems (see below).

When it comes to gender, Georgia has made important steps to integrate gender issues in climate action, including a commitment to collect, manage and report gender-disaggregated data in relation to both climate mitigation and adaptation action. Links between nationalized targets and commitments on SDG 5 (Gender Equality and Women's Empowerment) are made in the NDC, along with importing compliance with Georgia's Constitution and Law of Georgia on Gender Equality Decision 21/CP.22 on Gender and Climate Change (Government of Georgia, 2021a). In terms of implementation, the NDC notes the commitment to carry out gender analysis, capacity-building and knowledge sharing in climate-related projects and considers women as agents of change in climate action.

What Can Other Countries Learn from This Country to Raise Ambition?

Georgia has key lessons for other countries when it comes to Monitoring, Reporting and Verification (MRV). While Georgia has already an established system for monitoring and evaluation, the fact is there are certain gaps within the process that make this a challenge. For instance, there is a lack of sufficient coordination among stakeholders, a need for further qualified staff and limited availability of financial resources to thoroughly implement such a system. Other countries aiming to enhance ambition in their MRV systems, can use Georgia's experiences to facilitate coordination between various stakeholders, build capacity of staff and actively seek to leverage financial resources to effectively implement MRV systems. Georgia now has a commitment to collect, manage and report gender-disaggregated data in relation to both climate mitigation and adaptation action, and it is hoped that this may provide the entry point for ensuring more transparency on climate action, and to help to engage the public in raising ambition.

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CHAPTER 6

CONCLUDING RECOMMENDATIONS AND GUIDANCE: ACCELERATING AMBITION IN ASIA AND THE PACIFIC

6. CONCLUDING RECOMMENDATIONS AND GUIDANCE: ACCELERATING AMBITION IN ASIA AND THE PACIFIC

This study, which is a joint effort of ESCAP, UN WOMEN, UNEP and the greenwork, was designed to assess the ambition and potential of NDC commitments of countries in the Asia-Pacific region in 2021, and answer the question of whether 1.5°C is within reach for the region.

Through its practical case studies and analytical approach, this report targets an audience who are not just climate specialists, but also officials from all levels of government, including ministries of planning, and even from specific sectors, such as energy ministries.

The study reveals that the current NDC targets can collectively reduce GHG emissions to an estimated 29.2 $GtCO_2e$, by 2030, which under the current climate policy scenario would reach a total of 42.7 $GtCO_2e$ for the Asia-Pacific region, which represents an increase of 34 per cent of the regional GHG emissions compared to the 2010 levels. Yet, even if countries in Asia and the Pacific achieve these NDC targets, these commitments are still not going to deliver, by 2030, on the recommended regional reductions of 45 per cent from the 2010 emission levels to keep the region and the world within the 1.5°C global temperature rise.

Furthermore, the analysis reveals clearly that, under various scenarios, the current NDC pledges of the Asia-Pacific member States are insufficient. The NDC pledges need to be drastically enhanced to achieve carbon neutrality in the decade 2050-2060.

Without region-wide carbon neutral pledges, and further revised and more ambitious NDC targets before 2030 and after, carbon neutrality will not be within the reach of the Asia-Pacific region by 2050.

It is important for the Asia-Pacific member States to:

- Firmly commit to implementing even those very cautious GHG emissions' reductions pledges included in the earlier submitted and currently updated NDCs;
- Adhere to and follow through on carbon neutrality pledges;
- Put a price on carbon and apply carbon pricing instruments to generate revenues and create the fiscal space that can support a shift towards low-carbon and no-carbon energy sources;
- Commit to freezing the expansion of coal-based capacities and phasing out existing capacities in defined timeframes;
- Align COVID-19 recovery with NDC targets and commitments, and with SDG implementation and LT-LED strategies;
- Strengthen gender mainstreaming, by increasing efforts under all four enabling factors, ensuring more equal, inclusive and effective climate outcomes;

- Increase efforts under all four enabling factors - especially coordination and transparency (Measurement Reporting and Verification) that will support higher ambition;

- Further assess any measures taken to address the impacts and threats of COVID-19 for their climate compatibility;

- Share best practices and lessons learned, including for investments in nature-based climate solutions with all stakeholders at the local, national, and regional levels to build a stronger case for decisive climate action and policy measures from the whole society.

Overall, the research reveals that countries have started to engage in implementing their NDCs and enhancing climate action, however, to varying degrees. While a few countries are well advanced, many are still in the early stages of creating the framework of conditions for successful climate action.

Gender equality and women's rights gains are at risk with the increasing impacts of both sudden and slow onset climatic change, and with increased pressure/drawbacks caused by the COVID-19 pandemic in the region. However, the assessment report finds that gender-responsive climate action is gaining traction. Integrating and mainstreaming gender across all four enablers, and indeed in all climate action, can result in more equal, inclusive and effective climate action.

When considering the level of national climate mainstreaming, it appears that countries in the Asia-Pacific region have at least laid the foundations for implementing their NDCs, with many countries being rather engaged in this regard. However, it is also clear that, while the regulations in place are very important, compliance will require strong leadership for effective implementation.

This highlights that subregional and regional cooperation offers a good opportunity for equalising the level of the playing field, and for enabling mutually supportive climate in the true spirit of multilateral solidarity. The countries that are ahead of others would benefit from sharing experience and supporting those who are lagging behind, since climate change and its impact do not know boundaries. A true acceleration of the implementation of NDCs and ambitious NDC reviews can only be achieved in partnership with neighbouring countries, which also share the same ambition.

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