CLIMATE AMBITION
BEYOND EMISSION NUMBERS

Taking stock of progress by looking inside countries and sectors

SOUTH KOREA

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SEPTEMBER 2021
The report is available online:


**Financial support from**

The report "Climate Ambition Beyond Emission Numbers" is made possible thanks to an array of projects supporting in-country capacity on climate mitigation research across the targeted geographies. It is also financially supported by the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) as part of the "Climate Action After Paris" project (nr. 18_I_326) and the French government as part of the programme "investissements d’avenir" under the reference ANR-10- LABX-01.

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**Citation**

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Jessica Yun, Solutions for Our Climate.

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Disclaimer
The results presented in this report are outputs of the academic research conducted under the DDP BIICS project as per the contractual agreement. The academic work does not in any way represent our considered opinion for climate negotiations and also does not reflect the official policy or position of the Government of South Korea.
How is this document relevant to the Global Stocktake?

This document is part of a collective report that assesses the evolution of climate ambition in 26 countries and 3 hard-to-abate sectors through a granular and context-specific analysis of trends and progress of national and sectoral transformations.\(^1\) This approach allows identifying what hinders and spurs action in countries and sectors, and understanding the conditions that can support enhanced ambition, which could be political, social, economic, governance.

These insights are directly relevant to four overarching functions of the Global Stocktake in support of its desired outcome, i.e. “to inform Parties in updating and enhancing, in a nationally determined manner, their actions and support in accordance with the provisions of the Paris Agreement, as well as enhancing international cooperation for climate action” (Article 14.3 of the Paris Agreement):

- Create the conditions for an open and constructive conversation on global cooperation (on e.g., technology, trade, finance, etc.), based on an in-depth understanding of the international enablers of enhanced country ambition.
- Organize a process for knowledge sharing and collective learning, based on concrete examples of actions already in place or being discussed, including best practices.
- Create space for open dialogues across different stakeholders to support better coordination of actions, based on a detailed understanding of the levers to be activated to enhance ambition in national and sectoral transitions.
- Facilitate ownership by decision-makers of the climate challenge and the risks and opportunities of the low-emission and resilient transition, based on context-specific and granular analysis of barriers and enablers.

More specifically, the collective report in general – and this document in particular – can contribute to address some of the key guiding questions for the Global Stocktake\(^2\), notably:

- What actions have been taken to increase the ability to adapt to the adverse impacts of climate change and foster the climate resilience of people, livelihoods, and ecosystem? To what extent have national adaptation plans and related efforts contributed to these actions (Decision 19/CMA.1, paragraph 36(c))?  
- How adequate and effective are current adaptation efforts and support provided for adaptation (Article 7.14 (c) Paris Agreement)?

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• What are the barriers and challenges, including finance, technology development and transfer and capacity-building gaps, faced by developing countries?

• What is the collective progress made towards achieving the long-term vision on the importance of fully realizing technology development and transfer in order to improve resilience to climate change and to reduce greenhouse gas emissions referred in Article 10.1 of the Paris Agreement? What is the state of cooperative action on technology development and transfer?

• What progress been made on enhancing the capacity of developing country Parties to implement the Paris Agreement (Article 11.3 Paris Agreement)?

• To achieve the purpose and long-term goals of the Paris Agreement (mitigation, adaptation, and finance flows and means of implementation, as well as loss and damage, response measures), in the light of equity and the best available science, taking into account the contextual matters in the preambular paragraphs of the Paris Agreement:
  • What are the good practices, barriers and challenges for enhanced action?
  • What is needed to make finance flows consistent with a pathway towards low GHG emissions and climate-resilient development?
  • What are the needs of developing countries related to the ambitious implementation of the Paris Agreement?

• What is needed to enhance national level action and support, as well as to enhance international cooperation for climate action, including in the short term?

• What is the collective progress made by non-Party stakeholders, including indigenous peoples and local communities, to achieve the purpose and long-term goals of the Paris Agreement, and what are the impacts, good practices, potential opportunities, barriers and challenges (Decision 19/CMA.1, paras 36(g) and 37(i))?
Foreword

Henri Waisman, Marta Torres Gunfaus, Anna Perez Catala, IDDRI.

Country commitments as reflected in enhanced Nationally Determined Contributions submitted to the UNFCCC are insufficient to put the world on track to achieve the collective objective of the Paris Agreement to hold temperature increase below 2 °C or 1.5 °C above pre-industrial levels. Furthermore, concrete policies and actions adopted by countries on the ground are often not sufficient to achieve these NDC targets. These conclusions highlight the need to increase ambition and to provide convincing evidence to accelerate action in the immediate and short term to give effect to this ambition. Yet these assessments are not sufficient to effectively guide the progressive increase of ambition, as organized by the cyclical process of the Paris Agreement.

APPROACH

With this imperative in mind, this report adopts a different, complementary, perspective on climate ambition. It seeks to open the box of emission pathways, by considering multiple dimensions of the conditions that will make these pathways possible. These are technical, economic, political, social and governance considerations in need of attention to enable the required far-reaching and systemic transformation towards the long-term goal. On the one hand, the revision of emission targets needs to be directed by an assessment of how drivers of emissions should change to trigger transformation. On the other hand, converting emissions’ targets into pertinent concrete implementation requires well-designed policy packages and investment plans that are also informed by a clear and detailed understanding of the starting point, priorities and interplays between the available levers of transformation.

This bottom-up assessment aims at contributing to the process of collective learning in support of the progressive increase of collective ambition, as inserted at the core of the Paris Agreement paradigm. Approaching climate ambition through the lens of underlying transformations calls for reflecting the heterogeneous nature and the multi-faceted aspects of transitions in different sectors and countries. This forces a move away from a purely global perspective and adopts a more granular approach based on country and individual sector perspectives. Thus, the report explores trends and progress on these transformations, as locally observed over the past years, notably since the Paris Agreement. This ‘backwards looking’ approach can help identify where developments are going in the right direction, where they should be accelerated and where major tensions remain that should be addressed as a priority to avoid undermining the transition. The picture of the state of the ambition discussion, firmly embedded in the country and sectoral realities, can provide means for reflection and action within the international climate community, particularly to inform focus areas for advancing the collective ambition agenda.

STRUCTURE OF THE REPORT

This country report describes the recent evolutions of domestic discourses on climate ambition, national climate policy, national governance and concrete policies and actions with a significant effect on GHG emissions. The chapter highlights a selection of striking and structurally important elements to advance the transformation towards carbon neutrality from an in-country perspective. This report is part of a full series of 26 country chapters and three sectoral chapters. The full report includes a “summary for decision-makers” to present 10 cross-cutting messages emerging from the country and sector analysis, as a guide to the selection of priorities for collective action in the post-COP26 period.

You will find the full report at: https://www.iddri.org/sites/default/files/PDF/Publications/Catalogue%20Iddri/Rapport/DDP_beyond%20emissions%20report.pdf
SOUTH KOREA

CLIMATE AMBITION SINCE THE PARIS AGREEMENT

INTRODUCTION

In the years before South Korea signed the Paris Agreement, the Korean government received international attention for its “Low Carbon, Green Growth” policy direction and launch of the Korean Emissions Trading Scheme (K-ETS) – East Asia’s first nationwide cap-and-trade system – but these initiatives ultimately failed to reduce domestic greenhouse gas emissions as planned. While still considered an international climate laggard with a “highly insufficient” Nationally Determined Contribution (NDC), South Korea has had notable developments in its domestic discourse, national governance, and policies since the 2015 Paris Agreement that signal potential shifts in its resolve to address the climate crisis.

DOMESTIC DISCOURSE

With more extreme weather events, higher perception of climate change as a crisis but with trailing decarbonization ambition

With the increasing severity and frequency of extreme weather events, public perception of climate change as a crisis has grown and remains relatively

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1 https://climateactiontracker.org/countries/south-korea/

This chapter has been written thanks to the support of the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).
high when compared to that of other countries. In a 2021 survey of 1,000 adults residing in South Korea conducted by the Asian Citizen’s Center for Environment and Health, 86.7% of respondents recognized current climate change as a “climate crisis.” A survey of 1,500 participants in Korea conducted by Gallup in September 2020 found that 97.7% of respondents felt that the climate crisis was “serious,” and 95.8% had indicated that Covid-19 and extreme weather events had increased their perception of climate change as a crisis.

Gallup and the Worldwide Independent Network of Market Research (WIN) also found that among 34 countries polled, Korea had among the highest perceptions of climate change as a threat to humanity. This public perception has led to 226 out of South Korea’s 228 local municipalities collectively announcing a climate emergency on June 5, 2020 and the National Assembly, South Korea’s legislature, to pass a resolution recognizing the climate crisis as an emergency on September 24, 2020.

Despite the relatively high perception of the climate crisis in South Korea, ambition to decarbonize the economy and confidence that the country can achieve deep emissions cuts are lower. In the same Asian Citizen’s Center for Environment and Health survey, only 62.1% agreed with the Korean government’s goal of achieving carbon neutrality, with 45.8% responding that reaching net-zero emissions by 2050 will be difficult, and only 32.4% responding that achieving such a goal is possible. Other surveys indicate more ambitious public sentiment; in the September 2020 Gallup study, 90.6% of respondents agreed that emissions should reach net-zero by 2050.

Emphasis on individual action over government-led, system-wide changes could affect public ambition to achieve carbon neutrality. A study conducted by Korea’s Ministry of Culture, Sports and Tourism found that 27.1% of respondents believe that individual action is the most urgent task to tackle climate change, while 21.6% indicated central government policies and legal systems, 19.2%, industry efforts, and 17.2%, international efforts, as most critical.

Often, industry and government bureaucrats will point to South Korea’s manufacturing-oriented economy and its current high reliance on fossil fuels as challenges to achieving carbon neutrality. Vice Environment Minister Hong Jeong-kee has noted Korea’s “disadvantage” in reducing emissions compared to jurisdictions such as the European Union, where greenhouse gas emissions have peaked earlier.

In addition to extreme weather events, global climate mobilizations, international policy developments, and most recently, the political need to appeal to younger generations drive increasing mention of climate in Korea’s domestic discourse.

As briefly mentioned above, extreme weather events in South Korea have played a major role in increasing the perception of climate change as a crisis. In 2020, the country faced the longest monsoon season on record of 54 days, which caused prices of agricultural products to skyrocket and nearly US$90 million in economic damage. Media coverage of wildfires abroad in Australia, the Arctic, Western United States, and the Amazon Rainforest has also brought awareness to the severity of global climate change.

International mobilizations for climate action have also impacted South Korea’s domestic discourse. The Fridays for Future movement and global climate strikes have spread to the East Asian nation, culminating in a climate strike in Seoul of approximately 5,000 participants in September 2019— which,
while relatively small compared to other countries’, is still significant considering climate has not traditionally been a national agenda item.

Global mitigation efforts, especially from economies seen as peers to South Korea, are also important drivers of climate in Korea’s national discussions. Just weeks after China had pledged to achieve carbon neutrality by 2060 and days after Japan committed to reaching net-zero emissions by 2050, President Moon pledged that South Korea would also achieve carbon neutrality by 2050 in a budget address to the National Assembly on October 28, 2020.16

More recently, climate change has become a more popular issue among Korea’s two main political parties given the identification of voters in their 20s and 30s as the swing vote in the April 7, 2021 by-elections.17 In order to appeal to younger voters, who face the larger generational burden of climate change mitigation and impacts, both parties are increasingly appealing to their climate ambitions.

**NATIONAL GOVERNANCE**

Government ministries, primarily the Ministry of Environment, Ministry of Trade, Industry and Energy, and Ministry of Economy and Finance continue to play key roles in South Korea’s climate policymaking. The Presidential Office may also intervene directly on climate policy as demonstrated by President Moon Jae-in’s 2050 net-zero announcement.

In addition, various institutions have been established in South Korea since the signing of the Paris Agreement to address climate policy. Whereas previously, environmental and climate issues were mainly discussed in government committees with a handful of experts and civil society voices, such as in the Presidential Committee on Green Growth, newer institutions are attempting to increase public participation in climate policymaking, though some civic groups find these efforts inadequate.

### National Council on Climate & Air Quality

The National Council on Climate and Air Quality (NCCA) was launched in April 2019 in response to growing calls from the public and National Assembly to tackle the country’s “fine dust” pollution, and more secondarily, climate change. Unlike previous climate and environment-related committees, the NCCA, chaired by former UN Secretary-General Ban Ki-moon, offered a formal channel for expert and public participation through the National Policy Participation Group, using public polls and debates with a citizen panel of nearly 500 participants.18 These channels gave the Council the political legitimacy needed to propose bolder air pollution and climate measures to the Korean government.

One of the NCCA’s most immediate short-term tasks was reducing fine-dust levels, which led the Council to propose to the Korean government a package of policy recommendations on air pollution measures including the partial shutdown of coal power plants during the peak air pollution season of December to March.19 In November 2020, the Council recommended to the government a policy package tackling mid-to-long-term air pollution and climate tasks, including urging for a ban on diesel vehicle sales after 2035 and the phase-out of coal power by no later than 2040 given the government’s carbon neutrality pledge.20 However, with the creation of the Presidential Committee on Carbon Neutrality, the NCCA has been defunct as of April 30, 2021.21

### 2050 Low-carbon Vision Forum and LEDS Development

The 2050 Low-carbon Vision Forum, which consists of experts from academia, industry, and civil society, was established for the preparations of Korea’s Long-Term Low-Emissions Development Strategy (LEDS) submitted to the UN in 2020.22 The Forum drafted a proposal that was used for discussions between 15 relevant ministries including the Ministry of Environment. Opinions from stakeholders were collected

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17 [https://www.koreatimes.co.kr/www/nation/2021/06/356_310694.html](https://www.koreatimes.co.kr/www/nation/2021/06/356_310694.html)
21 [https://www.ncca.go.kr/](https://www.ncca.go.kr/)
22 [https://unfccc.int/documents/267683](https://unfccc.int/documents/267683)
through expert consultations, online surveys, and public hearings, such as a five-hour virtual online debate. However, civic groups have criticized the lack of transparency of LEDS discussions and failure to attract meaningful national participation.\(^{23}\)

**Carbon Neutrality Committee**

After the Korean government unveiled its commitment to achieve carbon neutrality by 2050 on October 28, 2020, a “2050 Carbon Neutrality Promotion Strategy,” which laid out plans to establish a joint public-private Presidential Committee on Carbon Neutrality, was announced on December 7, 2020. The Committee, which is tasked to lead the national vision of carbon neutrality and establish an implementation plan, was launched based on the 2050 Carbon Neutrality Committee Establishment and Operation Regulations in effect since May 4, 2021, by Presidential Decree.\(^{24}\) According to the regulations, the Committee is to be composed of 50 to 100 members, including the heads of 18 central government institutions (15 relevant ministries) as ex-officio members and 77 civilian members selected for their expertise, including individuals from civil society, youth, industry, and labor.\(^{25}\)

The Presidential Committee on Carbon Neutrality was officially launched in May 2021 and absorbed the functions of the former Presidential Committee on Green Growth and NCCA. There are eight sub-committees to facilitate discussions: (1) climate change (2) energy transformation, (3) economy and industry, (4) green living, (5) fair transition, (6) science and technology, (7) international cooperation, and (8) public participation.\(^{26}\) In 2021, the Presidential Committee on Carbon Neutrality will be reviewing emissions scenarios for 2050, and according to this scenario, providing input on the enhancement of Korea’s NDC.

**ACTIONS AND POLICIES**

In the years since the Paris Agreement, South Korea’s climate policy direction has shifted toward “carbon neutrality by 2050,” although a legal framework for mandating such pledge, a concrete emissions reduction enhancement by 2030, and a coal phase-out year have yet to be announced. Nonetheless, there have been significant announcements over the past several years that have contributed to greenhouse gas reductions.

**Renewable energy targets set in Korea Renewable Energy 3020 Plan and 9th Basic Plan for Power Supply and Demand**

In December 2017, the Korean government unveiled the Renewable Energy 3020 Implementation Plan, which set a target of sourcing 20% of total electricity generation from renewables by 2030. The Plan calls for a total renewables capacity of 63.8 GW, including 36.5 GW of solar and 17.7 GW of wind, by 2030.\(^{27}\) In the 9th Basic Plan for Electricity Supply and Demand (BPE) (2020–2034) presented in December 2020, South Korea’s renewables target for 2034 was set as 77.8 GW, with 45.6 GW of solar and 24.9 GW of wind. The 9th BPE also accelerated nearer-term renewables ambition by increasing the supply targets of solar and wind from 21.4 GW and 8.5 GW by 2025 to 33.5 GW and 9.2 GW, respectively, by 2025.\(^{28}\) However, according to a joint study by the Korea Advanced Institute of Science and Technology and Solutions for Our Climate, South Korea’s 2030 renewables target should be enhanced to 40% for the country to reach carbon neutrality by the mid-century.\(^{29}\)

**Pledge for no new coal power project approvals and Korean government’s internal lifespan of coal power plants set to 30 years**

During the 2017 presidential elections, then-candidate and now President Moon Jae-in committed to the cancellation of the 1,160 MW Dangjin Ecopower coal power project and to not approve any additional coal power projects, though those already approved would be continued. As of June 2021, there have been no new coal power projects approved

\(^{23}\) https://www.hani.co.kr/arti/society/environment/967018.html


\(^{27}\) https://www.motie.go.kr/motie/pv/bfr/motiebriefing/motiebriefing404.do?bfr_code=v=404#header


\(^{29}\) http://www.forourclimate.org/sub/data/view.html?idx=40&curpage=1
under the Moon administration, though 7GW of new coal power approved by previous administrations have not been canceled.

A key coal development in 2019 was the Korean government’s implicit recognition of 30 years as the acceptable life period of a coal plant. In 2019, South Chungcheong Province, which hosts approximately half of South Korea’s coal power fleet, successfully demanded the Korean government to stop retrofit aging (approximately 30 years old) coal power plants, which would have extended their lifetimes by one or two decades.30

**South Korea pledges to achieve carbon neutrality by 2050**

One of the most notable announcements since the Paris Agreement has been President Moon Jae-in’s pledge to achieve carbon neutrality by 2050. This announcement was welcomed by civic groups but also immediately raised questions on by how much Korea would enhance its NDC and accelerate the phase-out of coal power and ramp-up of renewables. On August 31, 2021, the South Korean legislature passed the “Framework Act on Carbon Neutrality,” which forms the legal basis for the 2050 carbon neutrality vision and Presidential Committee on Carbon Neutrality. The Act also enshrines into law a minimum of achieving at least 35% national greenhouse gas emissions reduction compared to 2018 levels. 31

**End of South Korean public overseas coal finance and wave of no-coal announcements from private financial institutions**

Korea was the third-largest international coal power financier between 2007 and 2014, behind China and Japan.32 Between 2008 to 2018, Korean public financial institutions provided over US$20 billion in support for coal power projects, about half of which was for overseas coal power projects, mostly in Southeast Asia.33 In April 2021 at the Leaders Summit on Climate, Korea announced it would end public financing for overseas coal power projects,34 though civil society has argued that the decision has come too late, as it failed to stop the financing of key coal power projects in Indonesia (Jawa 9 & 10) and Vietnam (Vung Ang 2). Civic groups have also warned against potential loopholes, including public financial support for coal plant retrofits and coal power projects equipped with carbon capture and storage (CCS), which were indicated in ministerial discussions.35

Driven by the growing controversy over coal projects, as well as a divestment initiative among sub-national governments led by South Chungcheong Province, there has been a growing shift of the Korean private financial sector away from coal, as well. In late 2020 and early 2021, Korea’s top five financial groups (KB,36 Shinhan,37 Woori,38 NH,39 and Hana40) made either no-coal or decarbonization commitment. In March 2021, a total of 84 financial institutions – including those that had already pledged to end coal finance – committed to end coal finance.41

**South Korea’s NDC enhancement to be made by 2021 with current proposed emissions cuts in the 40% range**

In November 2020, South Korea’s President Moon announced that Korea’s NDC of 24.4% emissions reduction below 2017 levels by 2030 would be enhanced by the end of his administration.42 In May 2021, Deputy Prime Minister Hong Nam-ki committed to reviewing the level of Korea’s 2030 NDC enhancement and submitting the strengthened NDC to the UN by the end of 2021.43

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31 [https://www.hani.co.kr/arti/society/environment/1009949.html](https://www.hani.co.kr/arti/society/environment/1009949.html)
34 [https://english1.president.go.kr/BriefingSpeeches/Speeches/971](https://english1.president.go.kr/BriefingSpeeches/Speeches/971)
35 [https://www.sedaily.com/NewsVIew/22ME9OBE3](https://www.sedaily.com/NewsVIew/22ME9OBE3)
38 [https://www.koreatimes.co.kr/www/biz/2020/12/126_300812.html](https://www.koreatimes.co.kr/www/biz/2020/12/126_300812.html)
39 [https://www.yna.co.kr/view/AKR2021020405950000027?input=1195](https://www.yna.co.kr/view/AKR2021020405950000027?input=1195)
41 [https://zdnet.co.kr/view/?no=20210309132244](https://zdnet.co.kr/view/?no=20210309132244)
42 [https://carbonpulse.com/115876/](https://carbonpulse.com/115876/)
Politicians have begun proposing potential NDC target figures. Jeju Province Governor Won Hee-ryong of the conservative opposition People Power Party advocated for Korea’s NDC to be adjusted to “at least 37.5%” compared to 2017 levels by 2030. In June 2021, leader of the ruling Democratic Party of Korea Song Young-gil proposed an NDC of “at least 40%” below 2017 levels by 2030 to the party caucus in the National Assembly. However, both of these figures remain insufficient from a climate perspective – the NDC would need to be enhanced to at least 59% below 2017 levels in order to be consistent with Paris Agreement temperature goals, according to a study by Climate Analytics. Remaining NDC discussions will take place between the government and the Presidential Committee on Carbon Neutrality before Korea’s NDC target – arguably the most important indicator of South Korea’s climate ambition -- is finalized and submitted to the UN by the end of 2021.

44 https://zdnet.co.kr/view/?no=20210616110503
The DDP is an initiative of the Institute for Sustainable Development and International Relations (IDDRI). It aims to demonstrate how countries can transform their economies by 2050 to achieve global net zero emissions and national development priorities, consistently with the Paris Agreement. The DDP initiative is a collaboration of leading research teams currently covering 36 countries. It originated as the Deep Decarbonization Pathways Project (DDPP), which analysed the deep decarbonization of energy systems in 16 countries prior to COP21 (deepdecarbonization.org). Analyses are carried out at the national scale, by national research teams. These analyses adopt a long-term time horizon to 2050 to reveal the necessary short-term conditions and actions to reach carbon neutrality in national contexts. They help governments and non-state actors make choices and contribute to in-country expertise and international scientific knowledge. The aim is to help governments and non-state actors make choices that put economies and societies on track to reach a carbon neutral world by the second half of the century. Finally, national research teams openly share their methods, modelling tools, data and the results of their analyses to share knowledge between partners in a very collaborative manner and to facilitate engagement with sectoral experts and decision-makers.

www.ddpinitiative.org

The Institute for Sustainable Development and International Relations (IDDRI) is an independent, not-for-profit policy research institute based in Paris. Its objective is to identify the conditions and propose tools to put sustainable development at the heart of international relations and public and private policies. IDDRI is also a multi-stakeholder dialogue platform and supports stakeholders in global governance debates on the major issues of common interest, such as actions to mitigate climate change, protect biodiversity, strengthen food security, and to manage urbanisation. The institute also participates in work to build development trajectories that are compatible with national priorities and the sustainable development goals.

www.iddri.org