CLIMATE POLICY LAB

POLICY BRIEF | MARCH 2023

CHINA'S CLIMATE POLICIES AND ACTIONS IN 2022

Hengrui Liu, Fang Zhang, Qi Qi, Travis Franck, and Kelly Sims Gallagher

Summary

This policy brief summarizes China's recent climate policies and actions, including the 1+N policy framework.

- China is developing an increasing number of policies for carbon peaking and neutrality.
- Progress has already been made on both mitigation and adaptation.
- Policies and targets have been updated as part of several strategies and frameworks, the most prominent of which during the year 2022 has been the 1+N policy framework.

China's Progress

Mitigation

In 2021, China's carbon dioxide emissions per unit of GDP were down 3.8% compared with 2020 and achieved a cumulative decrease of 50.8% compared with 2005. Non-fossil energy accounted for 16.6% of primary energy consumption. The total installed capacity of wind and solar power reached 635 GW.

Adaptation

As of 2020, China completed the construction of 132 million acres (800 million mu) of high-standard farmland. The effective utilization coefficient of farmland irrigation water was 0.565. The forest cover percentage has risen to 23.04% from 21.66% in 2015. The vegetation coverage ratio of grasslands is 56.1%. Nationwide, 52% of wetlands are protected, up from 43.5% in 2015.

Top-Level Policy Design

Carbon Peaking and Carbon Neutrality (CPCN) Leading Groups

Since 2021, the Chinese government has formed CPCN leading groups at the national, provincial, and municipal levels to strengthen coordination in response to climate change. Vice Premier Han Zheng heads the central CPCN leading group with officials from 30 ministries and commissions as members.

1+N Policy Framework

"1" refers to "Working Guidance For Carbon Dioxide Peaking And Carbon Neutrality in Full and Faithful Implementation of The New Development Philosophy" issued by the Communist Party of China Central Committee and the State Council on October 24, 2021. It provides overarching guidance and a roadmap for China's carbon peaking and neutrality goals.

This policy brief summarizes China's recent climate policies and actions, including the 1+N policy framework.

FLETCHER *The graduate school of global affairs at Tufts University*

The "N" stands for action plans and policy measures for key sectors and industries, which are required to peak emissions. Key areas of work include:

1. Optimize the energy structure
2. Promote industrial transition
3. Promote energy saving, low carbon buildings and infrastructure
4. Build a green and low-carbon transportation system
5. Develop a circular economy
6. Promote green and low-carbon technological innovation
7. Develop green finance to expand financial support and investment
8. Introduce supporting policies (new standards and laws)
9. Optimize the carbon trading market
10. Implement nature-based solutions

The 1+N policy framework, for the first time, sets a goal that 80% of energy consumption in 2060 should come from non-fossil energy sources, highlighting the importance of phasing out fossil fuels. It also aims to phase down coal and plateau oil consumption during the 15th Five-Year Plan (FYP) period (2026–2030).

Most provincial action plans prioritize the decarbonization of the industrial sector, primarily building materials, metallurgy, and chemical industries.

In 2022, China completed its "1+N" policy system at all administrative levels. Each province and municipality has formulated its own 1 + N policy documents. Most provincial action plans prioritize the decarbonization of the industrial sector, primarily building materials, metallurgy, and chemical industries.

Multiple major policy documents have been issued, and more are forthcoming. Some of the issued policies include:

- Action Plan for Carbon Peaking Before 2030, issued on October 24, 2021
- Medium and Long-Term Plan for the Development of the Hydrogen Energy Industry (2021-2035), issued on March 23, 2022
- Implementation Plan for Synergistic Efficiency of Pollution Reduction and Carbon Reduction, issued on June 10, 2022
- Technological Support for Carbon Peaking and Carbon Neutrality Implementation Plan, issued on June 24, 2022
- Agricultural and Rural Emission Reduction and Carbon Sequestration Implementation Plan, issued on June 30, 2022
- Implementation Plan for Carbon Peaking in the Industrial Sector, issued on July 7, 2022
- Implementation Plan for Carbon Peaking in Urban and Rural Construction, issued on July 13, 2022

National Climate Change Adaptation Strategy 2035

This strategy replaces a previous strategy that covered 2013 to 2020. The new strategy aims to strengthen China's socioeconomic resilience to climate change by improving climate change monitoring, early warning, and risk management, enhancing the adaptation ability of natural ecosystems, strengthening the adaptation ability of economic and social systems, and improving resilience in key vulnerable regions. The new strategy sets out to form a basic policy system and institutional mechanisms for adaptation by 2025 and to complete the system by 2030.

Other Policy Updates Other climate-related policies and targets include an updated Nationally Determined Contribution (NDC) and the 14th FYP, both of which demonstrate increased ambition compared to targets in China's first NDC, as shown in Table 1.

FOR ACADEMIC CITATION:

Liu, H., Zhang, F., Qi, Q., Franck, T. & Gallagher, K.S. "China's Climate Policies and Actions in 2022." Policy Brief, Climate Policy Lab, The Fletcher School at Tufts University, March 2023.

ABOUT THE AUTHORS:

Hengrui Liu is a predoctoral research fellow at the Climate Policy Lab.

Fang Zhang is Assistant Professor at Tsinghua University's School of Public Policy & Management and a faculty affiliate of Climate Policy Lab.

Qi Qi is a postdoctoral scholar at the Climate Policy Lab.

Travis Franck is Assistant Research Professor at The Fletcher School and Climate Modeling and Policy Director at Climate Policy Lab.

Kelly Sims Gallagher is Academic Dean and Professor of Energy and Environmental Policy at The Fletcher School. She is also the founding director of the Climate Policy Lab.

FUNDING FOR THIS RESEARCH:

This policy brief was supported by funding from the William and Flora Hewlett Foundation and the Rockefeller Brothers Fund. Any errors or misrepresentations are the sole responsibility of the authors.

Table 1: Comparing climate targets

Target Type	First NDC	2021 NDC Update*	14th FYP (2021–2025)
Carbon peaking and carbon neutrality	Peak "around 2030 and making efforts to peak earlier"	Peak "before 2030" and achieve carbon neutrality before 2060	
Carbon intensity	↓ by "60–65%" in 2030 from the 2005 level	↓ by "over 65%" in 2030 from the 2005 level	↓ by 18% in 2025 from the 2020 level
Non-fossil share of primary energy consumption	↑ to "around 20%" by 2030	↑ to "around 25%" by 2030	↑ to 20% by 2025
Forest stock volume	↑ by 4.5 billion cubic meters by 2030 from the 2005 level	↑ by around 6 billion cubic meters by 2030 from the 2005 level	
Installed capacity of wind and solar power (new)		↑ to over 1,200 GW by 2030	

*Submitted on 28 October 2021

Conclusion

With the 1+N Policy Framework, China has established a roadmap for peaking emissions that encompasses a broad range of goals across a number of sectors. One of its key goals is that 80% of energy consumption in 2060 should come from non-fossil energy sources. China has also introduced Carbon Peaking and Carbon Neutrality (CPCN) Leading Groups at all levels of government to strengthen coordination, and have increased ambition through several other mechanisms: an updated National Climate Change Adaptation Strategy, a more ambitious NDC, and new targets for 2025 in the 14th FYP. •